

EXHIBIT A
PART 2

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
REMEDATION AND REDEVELOPMENT DIVISION

COST RECOVERY SUMMARY REPORT

Date Printed 11/19/2009

Facility Name Delphi Saginaw Steering Systems
Site Name Delphi Saginaw Steering Systems
Address 3900 Holland Avenue
Facility ID 00018284
Site ID Number 73000051
Package 441244/00

Bankruptcy Pre 6/1/09

Total for Employee Salaries and Wages
Period Covered 1/19/08 through 2/9/08
Indirect Dollars

\$130 11

\$21 61

Sub-Total

\$151 72

Total for Employee Travel Expenses
Period Covered

Contractual Expenses

Period Covered

\$0 00

Contract Sub-Total

\$0 00

Total for Miscellaneous Expenses
Period Covered

\$0 00

\$0 00

MDNR/MDEQ Lab

Period Covered

\$0 00

Total for MDPH/Community Health Expenses
Period Covered

\$0 00

Attorney General Expenses

Period Covered

\$0 00

Sub-Total

\$151 72

Interest Calculated from through

\$0 00

Total Combined Expenses for Site and Interest

\$151 72

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
REMEDATION AND REDEVELOPMENT DIVISION

Date: 11/02/2009

Source: ERNIE

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Cost Recovery Summary Report

Site Name Delphi (GM) Saginaw Division Plant 2

County Saginaw

Site ID 73000052

Package 451634-00

GM and Delphi Bankruptcy Pre 6/1/09

Total for Employee Salaries and Wages

Period Covered 11/29/1991 - 06/01/2009

\$60,046 71

Indirect Dollars

\$10,852 60

Sub-Total

\$70,899 31

Total for Employee Travel Expenses

Period Covered 02/17/1995 - 06/03/2004

\$783 45

Contractual Expenses

Period Covered

\$0 00

Contract Sub-Total

\$0 00

Total for Miscellaneous Expenses

Period Covered 03/09/1998 - 03/09/1998

\$7 25

MDNR/MDEQ Lab

Period Covered

\$0 00

Total for MDPH/Community Health Expenses

Alternate Water Supply

Period Covered

\$0 00

Bottled Water

Period Covered

\$0 00

MDPH/MDCH Lab

Period Covered

\$0 00

Sub-Total

\$0 00

Attorney General Expenses

Period Covered

\$0 00

Other Expenses

Period Covered

\$0 00

Sub-Total

\$71,690 01

Interest Calculated from through

\$0 00

Total Combined Expenses for Site and Interest

\$71,690.01

Run Date 11/02/2009

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
REMEDATION AND REDEVELOPMENT DIVISION

Date: 11/02/2009

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Cost Recovery Summary Report

Site Name Delphi Energy and Chassis (GM) County Saginaw
Site ID 73000053
Package 451628-00 GM and Delphi Bankruptcy Pre 6/1/09

Total for Employee Salaries and Wages

Period Covered 11/09/1991 - 07/05/2003

\$2,186 97

Indirect Dollars

\$389 07

Sub-Total

\$2,576 04

Total for Employee Travel Expenses

Period Covered 07/18/1997 - 07/18/1997

\$12 97

Contractual Expenses

Period Covered

\$0 00

Contract Sub-Total

\$0 00

Total for Miscellaneous Expenses

Period Covered 09/18/1995 - 09/18/1995

\$1,059 00

MDNR/MDEQ Lab

Period Covered

\$0 00

Total for MDPH/Community Health Expenses

Alternate Water Supply

Period Covered

\$0 00

Bottled Water

Period Covered

\$0 00

MDPH/MDCH Lab

Period Covered

\$0 00

Sub-Total

\$0 00

Attorney General Expenses

Period Covered

\$0 00

Other Expenses

Period Covered

\$0 00

Sub-Total

\$3,648 01

Interest Calculated from through

\$0 00

Total Combined Expenses for Site and Interest

\$3,648.01

Run Date 11/02/2009

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
REMEDATION AND REDEVELOPMENT DIVISION

COST RECOVERY SUMMARY REPORT

Date Printed 11/2/2009

Facility Name General Motors Powertrain Plant
Site Name Gm-hydra Matic
Address 23500 Mound Rd, Warren, Macomb County
Facility ID 00006175
Site ID Number
Package 443909/00

Bankruptcy Pre 6/1/09

Total for Employee Salaries and Wages		
Period Covered 7/23/00 through 5/30/09	\$368 33	
Indirect Dollars	<u>\$63 39</u>	
Sub-Total		<u>\$431 72</u>
 Total for Employee Travel Expenses		
Period Covered		\$0 00
 Contractual Expenses		
Period Covered	<u>\$0 00</u>	
Contract Sub-Total		<u>\$0 00</u>
 Total for Miscellaneous Expenses		
Period Covered 5/1/09 through 5/30/09		\$14 00
 MDNR/MDEQ Lab		
Period Covered		\$0 00
 Total for MDPH/Community Health Expenses		
Period Covered		\$0 00
 Attorney General Expenses		
Period Covered		\$0 00
 Sub-Total		<u>\$445 72</u>
Interest Calculated from through		<u>\$0 00</u>
Total Combined Expenses for Site and Interest		<u><u>\$445 72</u></u>

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
REMEDATION AND REDEVELOPMENT DIVISION

COST RECOVERY SUMMARY REPORT

Date Printed 11/2/2009

Facility Name General Motors Technical Center
Site Name GM Technical Center-bio Med
Address 30009 Van Dyke Ave, Warren, Macomb County
Facility ID 00021466
Site ID Number
Package 447009/00

Bankruptcy Pre 6/1/09

Total for Employee Salaries and Wages	
Period Covered 3/31/02 through 4/13/02	\$386 91
Indirect Dollars	<u>\$73 82</u>
Sub-Total	<u>\$460 73</u>
 Total for Employee Travel Expenses	
Period Covered	\$0 00
 Contractual Expenses	
Period Covered	<u>\$0 00</u>
Contract Sub-Total	<u>\$0 00</u>
 Total for Miscellaneous Expenses	
Period Covered	\$0 00
 MDNR/MDEQ Lab	
Period Covered	\$0 00
 Total for MDPH/Community Health Expenses	
Period Covered	\$0 00
 Attorney General Expenses	
Period Covered	\$0 00
 Sub-Total	<u>\$460 73</u>
Interest Calculated from through	<u>\$0 00</u>
Total Combined Expenses for Site and Interest	<u>\$460 73</u>

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
REMEDATION AND REDEVELOPMENT DIVISION

COST RECOVERY SUMMARY REPORT

Date Printed 11/2/2009

Facility Name Research Laboratory-Building 102
Site Name Research Laboratories
Address 30500 Mound Rd, Warren, Macomb County
Facility ID 00036429
Site ID Number
Package 447753/00

Bankruptcy Pre 6/1/09

Total for Employee Salaries and Wages	
Period Covered 1/9/00 through 2/16/02	\$372.27
Indirect Dollars	<u>\$68.22</u>
Sub-Total	<u>\$440.49</u>
 Total for Employee Travel Expenses	
Period Covered 8/1/00 through 9/30/00	\$10.40
 Contractual Expenses	
Period Covered	<u>\$0.00</u>
Contract Sub-Total	<u>\$0.00</u>
 Total for Miscellaneous Expenses	
Period Covered	\$0.00
 MDNR/MDEQ Lab	
Period Covered	\$0.00
 Total for MDPH/Community Health Expenses	
Period Covered	\$0.00
 Attorney General Expenses	
Period Covered	\$0.00
 Sub-Total	<u>\$450.89</u>
Interest Calculated from through	<u>\$0.00</u>
Total Combined Expenses for Site and Interest	<u>\$450.89</u>

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
REMEDIATION AND REDEVELOPMENT DIVISION

COST RECOVERY SUMMARY REPORT

Date Printed 11/18/2009

Facility Name Steam / Water Plant - Building 107
Site Name TCF Site Operations - Tank TCF7
Address 6250 Chicago Rd, Warren, Macomb County
Facility ID. 00036430
Site ID Number
Package 447754

Bankruptcy Pre 6/1/09

Total for Employee Salaries and Wages	
Period Covered 6/27/99 through 9/4/99	\$373 33
Indirect Dollars	<u>\$81 50</u>
Sub-Total	<u>\$454 83</u>
 Total for Employee Travel Expenses	
Period Covered	\$0 00
 Contractual Expenses	
Period Covered	<u>\$0 00</u>
Contract Sub-Total	<u>\$0 00</u>
 Total for Miscellaneous Expenses	
Period Covered	\$0 00
 MDNR/MDEQ Lab	
Period Covered	\$0 00
 Total for MDPH/Community Health Expenses	
Period Covered	\$0 00
 Attorney General Expenses	
Period Covered	\$0 00
 Sub-Total	<u>\$454 83</u>
Interest Calculated from through	<u>\$0 00</u>
Total Combined Expenses for Site and Interest	<u>\$454 83</u>

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
REMEDATION AND REDEVELOPMENT DIVISION

COST RECOVERY SUMMARY REPORT

Date Printed 11/18/2009

Facility Name General Motors - Milford Proving Ground
Site Name: General Motors - Milford Proving Ground
Address 3300 General Motors Rd, Milford, Oakland County
Facility ID 00016461
Site ID Number
Package: 441314/00

Bankruptcy Pre 6/1/09

Total for Employee Salaries and Wages	
Period Covered 1/31/93 through 5/30/09	\$26,407 65
Indirect Dollars	<u>\$4,628 68</u>
Sub-Total	<u>\$31,036 33</u>
 Total for Employee Travel Expenses	
Period Covered 10/1/92 through 4/23/08	\$590 50
 Contractual Expenses	
Period Covered	<u>\$0 00</u>
Contract Sub-Total	<u>\$0 00</u>
 Total for Miscellaneous Expenses	
Period Covered 9/1/00 through 5/18/09	\$1,009 28
 MDNR/MDEQ Lab	
Period Covered	\$0 00
 Total for MDPH/Community Health Expenses	
Period Covered	\$0 00
 Attorney General Expenses	
Period Covered	\$0 00
 Sub-Total	<u>\$32,636 11</u>
Interest Calculated from through	<u>\$0 00</u>
Total Combined Expenses for Site and Interest	<u><u>\$32,636 11</u></u>

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
REMEDATION AND REDEVELOPMENT DIVISION

COST RECOVERY SUMMARY REPORT

Date Printed 11/2/2009

Facility Name. Gm Delphi Chassis System
Site Name GM - Delco
Address 13000 Eckles Rd, Livonia, Wayne County
Facility ID 00009600
Site ID Number
Package 444607/00

Bankruptcy Pre 6/1/09

Total for Employee Salaries and Wages	
Period Covered 10/3/99 through 7/7/01	\$415 73
Indirect Dollars	<u>\$75 35</u>
Sub-Total	<u>\$491 08</u>
 Total for Employee Travel Expenses	
Period Covered	\$0 00
 Contractual Expenses	
Period Covered	<u>\$0 00</u>
Contract Sub-Total	<u>\$0 00</u>
 Total for Miscellaneous Expenses	
Period Covered:	\$0 00
 MDNR/MDEQ Lab	
Period Covered	\$0 00
 Total for MDPH/Community Health Expenses	
Period Covered	\$0 00
 Attorney General Expenses	
Period Covered	\$0 00
 Sub-Total	<u>\$491 08</u>
Interest Calculated from through	<u>\$0 00</u>
Total Combined Expenses for Site and Interest	<u>\$491 08</u>

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
REMEDIATION AND REDEVELOPMENT DIVISION

COST RECOVERY SUMMARY REPORT

Date Printed 11/2/2009

Facility Name. GM Truck Group-Detroit Assembly
Site Name GM Truck Group-Detroit Assembly
Address, 601 Piquette St, Detroit, Wayne County
Facility ID 00006839
Site ID Number
Package 444041/00

Bankruptcy Pre 6/1/09

Total for Employee Salaries and Wages		
Period Covered 4/17/99 through 5/11/02	\$330 66	
Indirect Dollars	<u>\$63 48</u>	
Sub-Total		<u>\$394 14</u>
 Total for Employee Travel Expenses		
Period Covered		\$0 00
 Contractual Expenses		
Period Covered	<u>\$0 00</u>	
Contract Sub-Total		<u>\$0 00</u>
 Total for Miscellaneous Expenses		
Period Covered		\$0 00
 MDNR/MDEQ Lab		
Period Covered		\$0 00
 Total for MDPH/Community Health Expenses		
Period Covered		\$0 00
 Attorney General Expenses		
Period Covered		\$0 00
 Sub-Total		<u>\$394.14</u>
Interest Calculated from through		<u>\$0.00</u>
Total Combined Expenses for Site and Interest		<u><u>\$394.14</u></u>

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
REMEDATION AND REDEVELOPMENT DIVISION

COST RECOVERY SUMMARY REPORT

Date Printed 11/2/2009

Facility Name Gmc Saginaw Division Detroit
Site Name GM Saginaw Divison
Address 1840 Holbrook St, Detroit, Wayne County
Facility ID 00018282
Site ID Number -
Package 446564/00

Bankruptcy Pre 6/1/09

Total for Employee Salaries and Wages		
Period Covered	2/4/01 through 2/17/01	\$17 10
Indirect Dollars		<u>\$3 09</u>
Sub-Total		<u>\$20 19</u>
 Total for Employee Travel Expenses		
Period Covered		\$0 00
 Contractual Expenses		
Period Covered		<u>\$0 00</u>
Contract Sub-Total		<u>\$0 00</u>
 Total for Miscellaneous Expenses		
Period Covered		\$0 00
 MDNR/MDEQ Lab		
Period Covered		\$0 00
 Total for MDPH/Community Health Expenses		
Period Covered		\$0 00
 Attorney General Expenses		
Period Covered		\$0 00
 Sub-Total		<u>\$20 19</u>
Interest Calculated from	through	<u>\$0 00</u>
Total Combined Expenses for Site and Interest		<u>\$20 19</u>

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
REMEDATION AND REDEVELOPMENT DIVISION

COST RECOVERY SUMMARY REPORT

Date Printed 11/2/2009

Facility Name GM Warehousing & Distribution
Site Name GM Service Parts Operation
Address 50000 Ecorse Rd, Belleville, Wayne County
Facility ID 00019444
Site ID Number
Package 446796/00

Bankruptcy Pre 6/1/09

Total for Employee Salaries and Wages		
Period Covered 5/3/09 through 5/30/09	\$482 24	
Indirect Dollars	<u>\$78 56</u>	
Sub-Total		<u>\$560 80</u>
 Total for Employee Travel Expenses		
Period Covered		\$0 00
 Contractual Expenses		
Period Covered	<u>\$0 00</u>	
Contract Sub-Total		<u>\$0 00</u>
 Total for Miscellaneous Expenses		
Period Covered 5/1/09 through 5/30/09		\$15 00
 MDNR/MDEQ Lab		
Period Covered		\$0 00
 Total for MDPH/Community Health Expenses		
Period Covered		\$0 00
 Attorney General Expenses		
Period Covered		\$0 00
 Sub-Total		<u>\$575 80</u>
Interest Calculated from through		<u>\$0 00</u>
Total Combined Expenses for Site and Interest		<u>\$575 80</u>

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
REMEDATION AND REDEVELOPMENT DIVISION

COST RECOVERY SUMMARY REPORT

Date Printed 11/17/2009

Facility Name Inland Fisher Guide Div Gmc
Site Name Inland Fisher Guide Div GMC
Address 6307 W Fort St, Detroit, Wayne County
Facility ID. 5000458
Site ID Number
Package 448512/00

Bankruptcy Pre 6/1/09

Total for Employee Salaries and Wages	
Period Covered 4/19/09 through 5/2/09	\$403 38
Indirect Dollars	<u>\$65 71</u>
Sub-Total	<u>\$469 09</u>
 Total for Employee Travel Expenses	
Period Covered	\$0 00
 Contractual Expenses	
Period Covered	<u>\$0 00</u>
Contract Sub-Total	<u>\$0 00</u>
 Total for Miscellaneous Expenses	
Period Covered	\$0 00
 MDNR/MDEQ Lab	
Period Covered	\$0 00
 Total for MDPH/Community Health Expenses	
Period Covered	\$0 00
 Attorney General Expenses	
Period Covered	\$0 00
 Sub-Total	<u>\$469 09</u>
Interest Calculated from through	<u>\$0 00</u>
Total Combined Expenses for Site and Interest	<u><u>\$469 09</u></u>

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
REMEDATION AND REDEVELOPMENT DIVISION

Date: 11/18/2009

Source: ERNIE

Cost Recovery Summary Report - Combined

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Site Name Satterlee Sumpter Twp LF

County Wayne

Site ID 82000048

Packages 453321-00

Satterlee Sumpter Twp - GM Bankruptcy _ Pre 6/1/09, Update 4, Update 5

Total for Employee Salaries and Wages

Period Covered 03/14/1992 - 05/16/2009

\$143,841 90

Indirect Dollars

\$23,844 34

Sub-Total

\$167,686 24

Total for Employee Travel Expenses

Period Covered 02/13/1993 - 09/05/2006

\$6,671 93

Contractual Expenses

VV OPERATION SERVICES (GA7011)

Period Covered 07/23/1993 - 07/23/1993

\$985 00

Malcolm Pirnie, Inc (LOE #9499) (P9000916)

Period Covered 04/28/1999 - 03/23/2001

\$243,441 58

DLZ Laboratories, Inc (Y80240)

Period Covered 06/04/1999 - 09/10/1999

\$6,480 00

Trace Analytical Laboratories, Inc (Y80243)

Period Covered 12/17/1999 - 01/14/2000

\$19,331 00

Malcolm Pirnie, Inc (LOE #2005) (P2000476)

Period Covered 12/26/2001 - 03/08/2005

\$55,160 80

Contract Sub-Total

\$325,398 38

Total for Miscellaneous Expenses

Period Covered 02/09/1993 - 08/09/2004

\$4,621 88

MDNR/MDEQ Lab

Period Covered 06/04/1997 - 07/16/1999

\$125,249 30

Total for MDPH/Community Health Expenses

Alternate Water Supply

Period Covered

\$0 00

Bottled Water

Period Covered

\$0 00

MDPH/MDCH Lab

Period Covered

\$0 00

Sub-Total

\$0 00

Attorney General Expenses

Period Covered 08/01/2008 - 08/31/2008

\$2,126 25

Other Expenses

Period Covered

\$0 00

Sub-Total

\$631,753 98

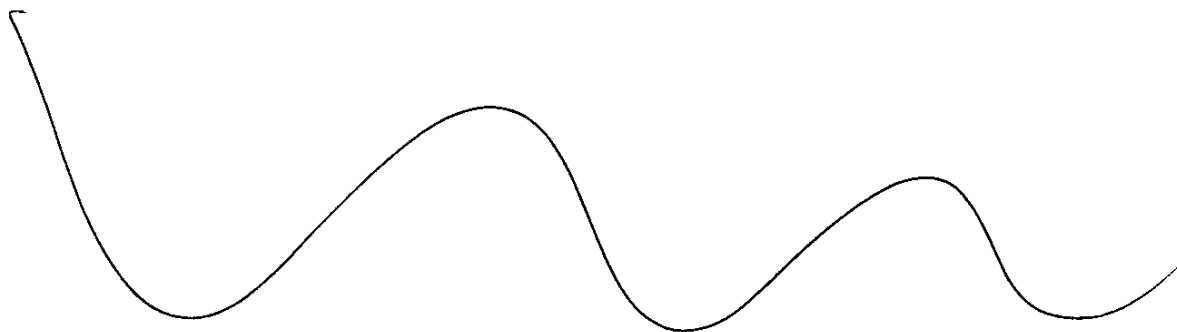
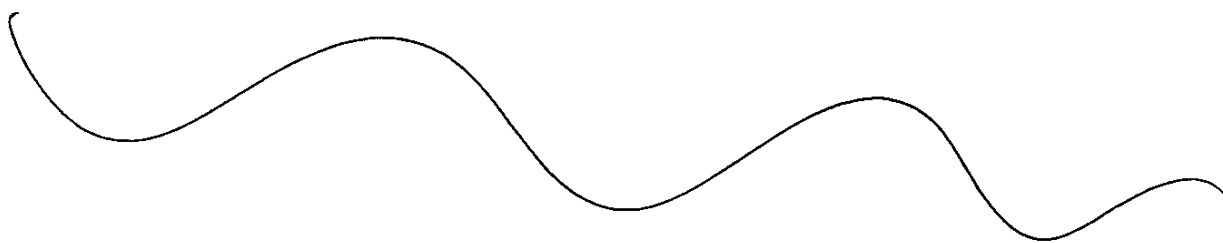
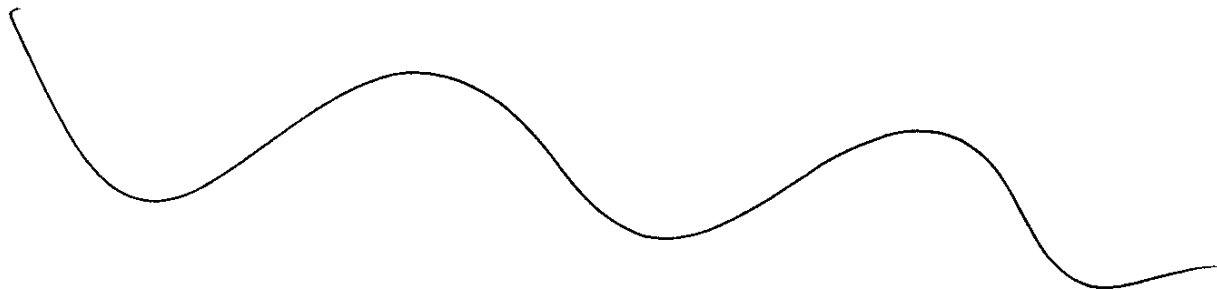
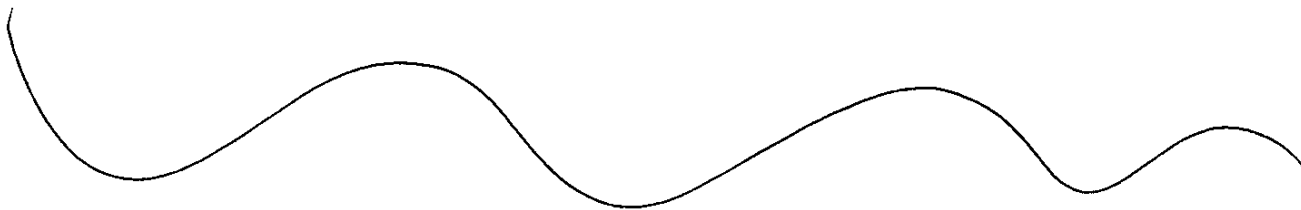
Interest Calculated from through

\$0 00

Total Combined Expenses for Site and Interest

\$631,753.98

Run Date 04/29/2009



Attachment B
Michigan Department of Environmental Quality
Remediation and Redevelopment Division
Motors Liquidation Company (MLC) Sites
Post Petition Cost Summary

Enforcement Confidential / Pre-Decisional

Facility/Site Name	Facility Name or other reference	Site ID	Facility Type	Facility ID	Address	City	District	County	Prop No	Phase	Costs Post Bankruptcy Filing
General Motors - CPC Metals	General Motors - CPC Metals	41000115			300 36th Street	Wyoming	Grand Rapids	Kent	451588	00	\$3,433 52
Linden Road Landfill	Agreement for a Limited Recreational Remedy Landuse-ERD-98-011	25000016			Linden Road	Flint	Lansing	Genesee	452223	65	\$114 93
GM Die Storage Lot		25000683			S Saginaw/Atherton	Flint	Lansing	Genesee	455907	00	\$74 23
Windiate Park/Duxeland Subdvn	Agreement for Limited Residential Land Use Remedy Landuse-ERD-98-010	25000689			Milton Drive & Pengelly	Flint	Lansing	Genesee	454176	00	\$1,471 71
GMC Lansing Grand River Assembly	Boc Plant #1, Tank #8	33000534	00	00013819	920 Townsend	Lansing	Lansing	Ingham	441769	00	\$552 15
GMPT Bay City		09000014			100 FITZGERALD ST	BAY CITY	Saginaw Bay	Bay	450064	65	\$305 98
GM SMI		73000014			77 W Center St	Saginaw	Saginaw Bay	Saginaw	454890	65	\$2 392 30
CSX Former GM Modular Iron Yard		73000524			North of 2619 N Washington	Saginaw	Saginaw Bay	Saginaw	455159	00	\$101 59
Other Obligations								MLC-Owned Sites Sub-Total			\$8,446 41
General Motors/Inland Division		41000311			2150 Alpine Avenue NW	Walker	Grand Rapids	Kent	456325	00	\$263 74
GM - Willow Run Assembly	Former Willow Run Assembly Plant	81000496			Tyler Road	Ypsilanti	Jackson	Washtenaw	455970	00	\$62 77
Willow Run Creek Area	95-799870-CE Consent Judgement	81000048			Tyler Road & I-96 Area	Ypsilanti	Jackson	Jackson	454227	65	\$408 97
Bay City Middlegrounds	Consent Decree Case Number 98-3513-CE-B, Includes Invoice 563872	09000004			800 Evergreen Drive	Bay City	Saginaw Bay	Bay	455080	65	\$8,415 31
Delphi (GM) Saginaw Division Plant 2		73000052			1400 Holmes	Saginaw	Saginaw Bay	Saginaw	451634	00	\$310 40
General Motors - Milford Proving Ground	General Motors - Milford Proving Ground		00	00016461	3300 General Motors Rd, MC 483-323-206	Milford	SE Michigan	Oakland	441314	00	\$113 13

Attachment B
Michigan Department of Environmental Quality
Remediation and Redevelopment Division
Motors Liquidation Company (MLC) Sites
Post Petition Cost Summary

Enforcement Confidential / Pre-Decisional

Facility/Site Name	aka Site Name/other reference	Site ID	Facility Type	Facility ID	Address	City	District	County	Project No.	Phase	Costs Post-Backruptcy Filing
Saterlee Sumpter Twp LF	Tolling Agreement	82000048			40195 Judd Road	Sumpter Township	SE Michigan	Wayne	453321	00	\$1,490.86
							MLC Other Obligations - Sites Sub-Total				\$11,065.18
							All Sites - Grand Total				\$19,511.59

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
REMEDIATION AND REDEVELOPMENT DIVISION

Date: 11/02/2009

Source: ERNIE

Cost Recovery Summary Report

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Site Name General Motors - CPC Metals

County Kent

Site ID 41000115

Package 451588-00

GM - CPC Metals Bankruptcy Post 6/1/09

Total for Employee Salaries and Wages

Period Covered 06/13/2009 - 09/19/2009

\$2,952 55

Indirect Dollars

\$480 97

Sub-Total

\$3,433 52

Total for Employee Travel Expenses

Period Covered

\$0 00

Contractual Expenses

Period Covered

\$0 00

Contract Sub-Total

\$0 00

Total for Miscellaneous Expenses

Period Covered

\$0 00

MDNR/MDEQ Lab

Period Covered

\$0 00

Total for MDPH/Community Health Expenses

Alternate Water Supply

Period Covered

\$0 00

Bottled Water

Period Covered

\$0 00

MDPH/MDCH Lab

Period Covered

\$0 00

Sub-Total

\$0 00

Attorney General Expenses

Period Covered

\$0 00

Other Expenses

Period Covered

\$0 00

Sub-Total

\$3,433 52

Interest Calculated from through

\$0 00

Total Combined Expenses for Site and Interest

\$3,433.52

Run Date 10/29/2009

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
REMEDATION AND REDEVELOPMENT DIVISION

Date: 11/12/2009

Source: ERNIE

Cost Recovery Summary Report

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Site Name Linden Road LF

County Genesee

Site ID 25000016

Package 452223-65

General Motors Bankruptcy Post 6/1/09

Total for Employee Salaries and Wages

Period Covered 06/01/2009 - 09/19/2009 \$98 83

Indirect Dollars \$16 10

Sub-Total \$114 93

Total for Employee Travel Expenses

Period Covered \$0 00

Contractual Expenses

Period Covered \$0 00

Contract Sub-Total \$0 00

Total for Miscellaneous Expenses

Period Covered \$0 00

MDNR/MDEQ Lab

Period Covered \$0 00

Total for MDPH/Community Health Expenses

Alternate Water Supply

Period Covered \$0 00

Bottled Water

Period Covered \$0 00

MDPH/MDCH Lab

Period Covered \$0 00

Sub-Total \$0 00

Attorney General Expenses

Period Covered \$0 00

Other Expenses

Period Covered \$0 00

Sub-Total \$114 93

Interest Calculated from through \$0 00

Total Combined Expenses for Site and Interest

\$114.93

Run Date 11/12/2009

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
REMEDATION AND REDEVELOPMENT DIVISION

Date: 11/17/2009

Source: ERNIE

Cost Recovery Summary Report

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Site Name GM Die Storage Lot

County Genesee

Site ID 25000683

Package 455907-00

GM Die Storage Lot Bankruptcy Post 6/1/09

Total for Employee Salaries and Wages

Period Covered: 08/23/2009 - 09/05/2009

\$63 83

Indirect Dollars

\$10 40

Sub-Total

\$74 23

Total for Employee Travel Expenses

Period Covered:

\$0 00

Contractual Expenses

Period Covered

\$0 00

Contract Sub-Total

\$0 00

Total for Miscellaneous Expenses

Period Covered

\$0 00

MDNR/MDEQ Lab

Period Covered

\$0 00

Total for MDPH/Community Health Expenses

Alternate Water Supply

Period Covered

\$0 00

Bottled Water

Period Covered

\$0 00

MDPH/MDCH Lab

Period Covered

\$0 00

Sub-Total

\$0 00

Attorney General Expenses

Period Covered

\$0 00

Other Expenses

Period Covered

\$0 00

Sub-Total

\$74 23

Interest Calculated from through

\$0 00

Total Combined Expenses for Site and Interest

\$74.23

Run Date 10/29/2009

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
REMEDATION AND REDEVELOPMENT DIVISION

Date: 11/18/2009
Source: ERNIE
Page: 1 of 1

Cost Recovery Summary Report

Site Name Windiate Park/Dixieland Subdvn County Genesee
Site ID 25000689
Package 454176-00 General Motors Bankruptcy Post 6/1/09

Total for Employee Salaries and Wages

Period Covered 06/01/2009 - 09/19/2009

\$1,237 42

Indirect Dollars

\$201 58

Sub-Total

\$1,439 00

Total for Employee Travel Expenses

Period Covered 06/01/2009 - 06/30/2009

\$32 71

Contractual Expenses

Period Covered

\$0 00

Contract Sub-Total

\$0 00

Total for Miscellaneous Expenses

Period Covered

\$0 00

MDNR/MDEQ Lab

Period Covered

\$0 00

Total for MDPH/Community Health Expenses

Alternate Water Supply

Period Covered

\$0 00

Bottled Water

Period Covered

\$0 00

MDPH/MDCH Lab

Period Covered

\$0 00

Sub-Total

\$0 00

Attorney General Expenses

Period Covered

\$0 00

Other Expenses

Period Covered

\$0 00

Sub-Total

\$1,471 71

Interest Calculated from through

\$0 00

Total Combined Expenses for Site and Interest

\$1,471.71

Run Date 11/12/2009

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
REMEDATION AND REDEVELOPMENT DIVISION

COST RECOVERY SUMMARY REPORT

Date Printed 11/17/2009

Facility Name: GMC Lansing Grand River Assembly
Site Name: Boc Plant #1, Tank #8
Address: 920 Townsend, Lansing, Ingham County
Facility ID: 00013819
Site ID Number: 33000534
Package: 441769/00

Bankruptcy Post 6/1/09

Total for Employee Salaries and Wages		
Period Covered	7/12/09 through 7/25/09	\$474 80
Indirect Dollars		<u>\$77 35</u>
Sub-Total		<u>\$552 15</u>
 Total for Employee Travel Expenses		
Period Covered		\$0 00
 Contractual Expenses		
Period Covered		<u>\$0 00</u>
Contract Sub-Total		<u>\$0 00</u>
 Total for Miscellaneous Expenses		
Period Covered		\$0 00
 MDNR/MDEQ Lab		
Period Covered		\$0 00
 Total for MDPH/Community Health Expenses		
Period Covered		\$0 00
 Attorney General Expenses		
Period Covered		\$0 00
 Sub-Total		<u>\$552 15</u>
Interest Calculated from	through	<u>\$0 00</u>
Total Combined Expenses for Site and Interest		<u>\$552 15</u>

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
REMEDATION AND REDEVELOPMENT DIVISION

Date: 11/16/2009

Source: ERNIE

Cost Recovery Summary Report

Page: 1 of 1

Site Name GMPT Bay City

County Bay

Site ID 09000014

Package 450064-65

GM CPC Plant (Settlement) Bankruptcy Post 6/1/09

Total for Employee Salaries and Wages

Period Covered 06/01/2009 - 08/08/2009

\$263 12

Indirect Dollars

\$42 86

Sub-Total

\$305 98

Total for Employee Travel Expenses

Period Covered

\$0 00

Contractual Expenses

Period Covered

\$0 00

Contract Sub-Total

\$0 00

Total for Miscellaneous Expenses

Period Covered

\$0 00

MDNR/MDEQ Lab

Period Covered

\$0 00

Total for MDPH/Community Health Expenses

Alternate Water Supply

Period Covered

\$0 00

Bottled Water

Period Covered

\$0 00

MDPH/MDCH Lab

Period Covered

\$0 00

Sub-Total

\$0 00

Attorney General Expenses

Period Covered

\$0 00

Other Expenses

Period Covered

\$0 00

Sub-Total

\$305 98

Interest Calculated from through

\$0 00

Total Combined Expenses for Site and Interest

\$305.98

Run Date 10/29/2009

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
REMEDATION AND REDEVELOPMENT DIVISION

Date: 11/16/2009
Source: ERNIE
Page: 1 of 1

Cost Recovery Summary Report

Site Name GM SMI County Saginaw
Site ID 73000014
Package 454890-65 GM Malleable Iron (Stmt) Bankruptcy Post 6/1/09

Total for Employee Salaries and Wages		
Period Covered 06/01/2009 - 09/05/2009	\$2,057 18	
Indirect Dollars	\$335 12	
Sub-Total		\$2,392 30
Total for Employee Travel Expenses		
Period Covered		\$0 00
Contractual Expenses		
Period Covered	\$0 00	
Contract Sub-Total		\$0 00
Total for Miscellaneous Expenses		
Period Covered		\$0 00
MDNR/MDEQ Lab		
Period Covered		\$0 00
Total for MDPH/Community Health Expenses		
Alternate Water Supply		
Period Covered	\$0 00	
Bottled Water		
Period Covered	\$0 00	
MDPH/MDCH Lab		
Period Covered	\$0 00	
Sub-Total		\$0 00
Attorney General Expenses		
Period Covered		\$0 00
Other Expenses		
Period Covered		\$0 00
Sub-Total		\$2,392 30
Interest Calculated from through		\$0 00
Total Combined Expenses for Site and Interest		\$2,392 30
Run Date 10/29/2009		

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
REMEDATION AND REDEVELOPMENT DIVISION

Date: 11/18/2009

Source: ERNIE

Cost Recovery Summary Report

Page: 1 of 1

Site Name CSX Former GM Nodular Iron Yard

County Saginaw

Site ID 73000524

Package 455159-00

CSX Fr GM Nodular Iron Ya/GM Bankruptcy - Post 6/1/09 -----

Total for Employee Salaries and Wages

Period Covered 07/26/2009 - 08/08/2009

\$87 36

Indirect Dollars

\$14 23

Sub-Total

\$101 59

Total for Employee Travel Expenses

Period Covered

\$0 00

Contractual Expenses

Period Covered

\$0 00

Contract Sub-Total

\$0 00

Total for Miscellaneous Expenses

Period Covered

\$0 00

MDNR/MDEQ Lab

Period Covered

\$0 00

Total for MDPH/Community Health Expenses

Alternate Water Supply

Period Covered

\$0 00

Bottled Water

Period Covered

\$0 00

MDPH/MDCH Lab

Period Covered

\$0 00

Sub-Total

\$0 00

Attorney General Expenses

Period Covered

\$0 00

Other Expenses

Period Covered

\$0 00

Sub-Total

\$101 59

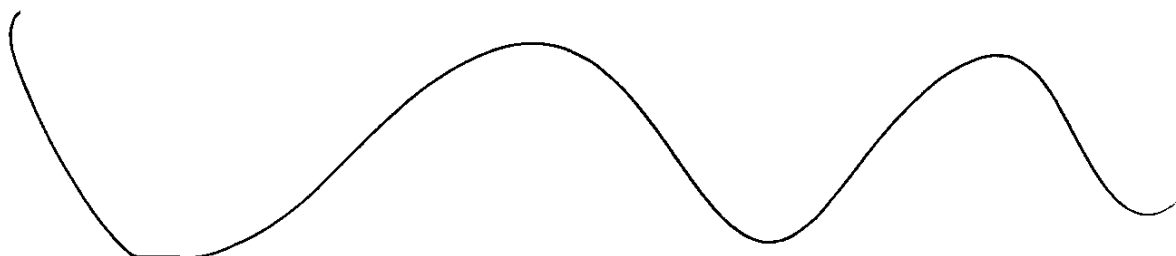
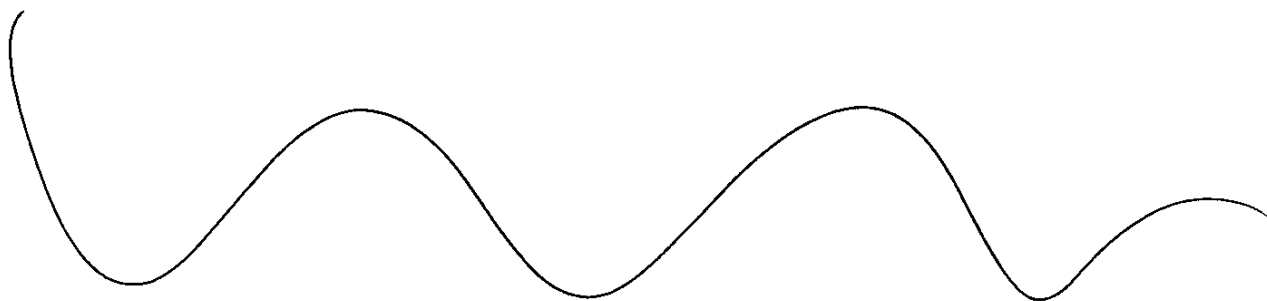
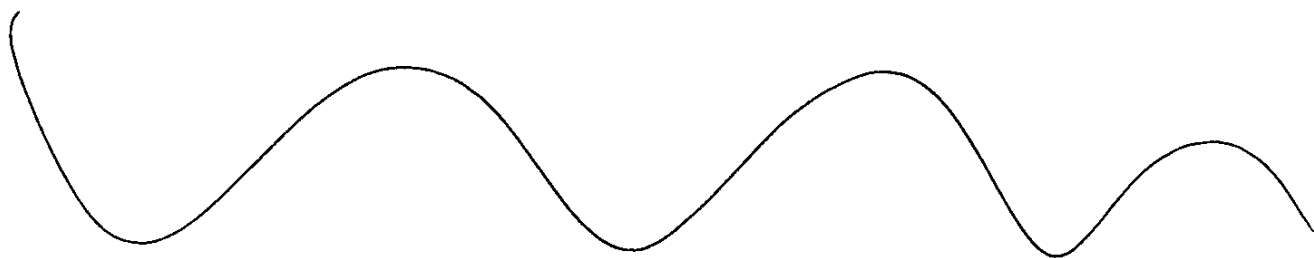
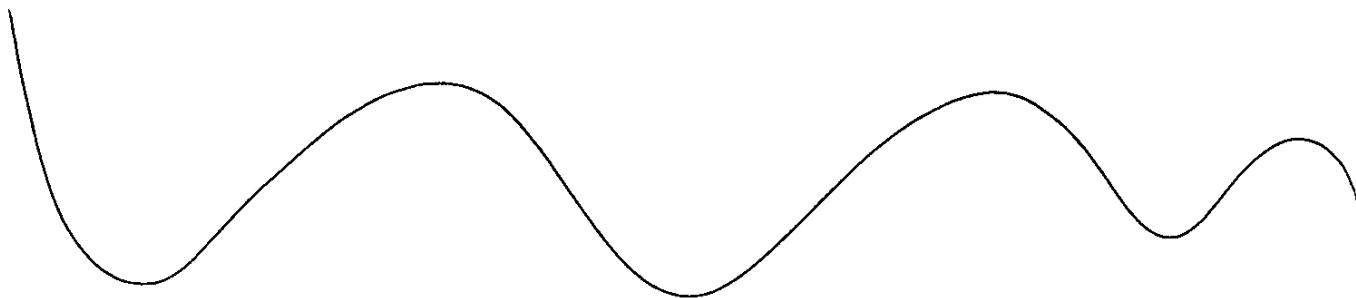
Interest Calculated from through

\$0 00

Total Combined Expenses for Site and Interest

\$101.59

Run Date 10/29/2009



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
REMEDIATION AND REDEVELOPMENT DIVISION

Date: 11/16/2009

Source: ERNIE

Cost Recovery Summary Report

Page: 1 of 1

Site Name General Motors/Inland Division

County Kent

Site ID 41000311

Package 456325-00 GM/Inland Division Bankruptcy Post 6/1/09

Total for Employee Salaries and Wages

Period Covered 07/26/2009 - 08/08/2009

\$226 80

Indirect Dollars

\$36 94

Sub-Total

\$263 74

Total for Employee Travel Expenses

Period Covered

\$0 00

Contractual Expenses

Period Covered

\$0 00

Contract Sub-Total

\$0 00

Total for Miscellaneous Expenses

Period Covered

\$0 00

MDNR/MDEQ Lab

Period Covered

\$0 00

Total for MDPH/Community Health Expenses

Alternate Water Supply

Period Covered

\$0 00

Bottled Water

Period Covered

\$0 00

MDPH/MDCH Lab

Period Covered

\$0 00

Sub-Total

\$0 00

Attorney General Expenses

Period Covered

\$0 00

Other Expenses

Period Covered

\$0 00

Sub-Total

\$263 74

Interest Calculated from through

\$0 00

Total Combined Expenses for Site and Interest

\$263.74

Run Date 10/29/2009

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
REMEDATION AND REDEVELOPMENT DIVISION

Date: 11/16/2009
Source: ERNIE
Page: 1 of 1

Cost Recovery Summary Report

Site Name GM - Willow Run Assembly County Washtenaw

Site ID: 81000496

Package 455970-00 GM Willow Run Assembly Bankruptcy Post 6/1/09 - - - - -

Total for Employee Salaries and Wages

Period Covered 07/26/2009 - 08/08/2009 \$53 98

Indirect Dollars \$8 79

Sub-Total \$62 77

Total for Employee Travel Expenses

Period Covered \$0 00

Contractual Expenses

Period Covered \$0 00

Contract Sub-Total \$0 00

Total for Miscellaneous Expenses

Period Covered \$0 00

MDNR/MDEQ Lab

Period Covered \$0 00

Total for MDPH/Community Health Expenses

Alternate Water Supply

Period Covered \$0 00

Bottled Water

Period Covered \$0 00

MDPH/MDCH Lab

Period Covered \$0 00

Sub-Total \$0 00

Attorney General Expenses

Period Covered \$0 00

Other Expenses

Period Covered \$0 00

Sub-Total \$62 77

Interest Calculated from through \$0 00

Total Combined Expenses for Site and Interest \$62.77

Run Date 10/29/2009

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
REMEDIATION AND REDEVELOPMENT DIVISION

Date: 11/12/2009

Source: ERNIE

Cost Recovery Summary Report

Page: 1 of 1

Site Name Willow Run Creek Area

County Washtenaw

Site ID 81000048

Package 454227-65 General Motors Bankruptcy Post 6/1/09

Total for Employee Salaries and Wages

Period Covered 06/01/2009 - 07/25/2009

\$351 68

Indirect Dollars

\$57 29

Sub-Total

\$408 97

Total for Employee Travel Expenses

Period Covered

\$0 00

Contractual Expenses

Period Covered

\$0 00

Contract Sub-Total

\$0 00

Total for Miscellaneous Expenses

Period Covered

\$0 00

MDNR/MDEQ Lab

Period Covered

\$0 00

Total for MDPH/Community Health Expenses

Alternate Water Supply

Period Covered

\$0 00

Bottled Water

Period Covered

\$0 00

MDPH/MDCH Lab

Period Covered

\$0 00

Sub-Total

\$0 00

Attorney General Expenses

Period Covered

\$0 00

Other Expenses

Period Covered

\$0 00

Sub-Total

\$408 97

Interest Calculated from through

\$0 00

Total Combined Expenses for Site and Interest

\$408.97

Run Date 11/12/2009

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
REMEDATION AND REDEVELOPMENT DIVISION

Date: 11/02/2009
Source: ERNIE
Page: 1 of 1

Cost Recovery Summary Report

Site Name Bay City Middlegrounds

County Bay

Site ID 09000004

Package 455080-65

General Motors Bankruptcy Post 6/1/09

Total for Employee Salaries and Wages

Period Covered 06/01/2009 - 09/19/2009

\$7,126 56

Indirect Dollars

\$1,160 92

Sub-Total

\$8,287 48

Total for Employee Travel Expenses

Period Covered 06/01/2009 - 09/11/2009

\$127 83

Contractual Expenses

Period Covered

\$0 00

Contract Sub-Total

\$0 00

Total for Miscellaneous Expenses

Period Covered

\$0 00

MDNR/MDEQ Lab

Period Covered

\$0 00

Total for MDPH/Community Health Expenses

Alternate Water Supply

Period Covered

\$0 00

Bottled Water

Period Covered

\$0 00

MDPH/MDCH Lab

Period Covered

\$0 00

Sub-Total

\$0 00

Attorney General Expenses

Period Covered

\$0 00

Other Expenses

Period Covered

\$0 00

Sub-Total

\$8,415 31

Interest Calculated from through

\$0 00

Total Combined Expenses for Site and Interest

\$8,415.31

Run Date 11/02/2009

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
REMEDATION AND REDEVELOPMENT DIVISION

Date: 11/02/2009

Source: ERNIE

Cost Recovery Summary Report

Page: 1 of 1

Site Name Delphi (GM) Saginaw Division Plant 2

County Saginaw

Site ID 73000052

Package 451634-00

GM and Delphi Bankruptcy Post 6/1/09

Total for Employee Salaries and Wages

Period Covered 06/02/2009 - 08/08/2009 \$266 92

Indirect Dollars \$43 48

Sub-Total \$310 40

Total for Employee Travel Expenses

Period Covered \$0 00

Contractual Expenses

Period Covered \$0 00

Contract Sub-Total \$0.00

Total for Miscellaneous Expenses

Period Covered \$0 00

MDNR/MDEQ Lab

Period Covered \$0 00

Total for MDPH/Community Health Expenses

Alternate Water Supply

Period Covered \$0 00

Bottled Water

Period Covered \$0 00

MDPH/MDCH Lab

Period Covered \$0 00

Sub-Total \$0 00

Attorney General Expenses

Period Covered \$0 00

Other Expenses

Period Covered \$0 00

Sub-Total \$310 40

Interest Calculated from through

\$0 00

Total Combined Expenses for Site and Interest

\$310.40

Run Date 10/29/2009

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
REMEDATION AND REDEVELOPMENT DIVISION

COST RECOVERY SUMMARY REPORT

Date Printed 11/2/2009

Facility Name General Motors - Milford Proving Ground
Site Name General Motors - Milford Proving Ground
Address 3300 General Motors Rd, Milford, Oakland County
Facility ID 00016461
Site ID Number
Package 441314/00

Bankruptcy Post 6/1/09

Total for Employee Salaries and Wages	
Period Covered. 6/1/09 through 6/13/09	\$97 28
Indirect Dollars	<u>\$15 85</u>
Sub-Total	<u>\$113 13</u>
 Total for Employee Travel Expenses	
Period Covered	\$0 00
 Contractual Expenses	
Period Covered	<u>\$0 00</u>
Contract Sub-Total	<u>\$0 00</u>
 Total for Miscellaneous Expenses	
Period Covered	\$0 00
 MDNR/MDEQ Lab	
Period Covered	\$0 00
 Total for MDPH/Community Health Expenses	
Period Covered	\$0 00
 Attorney General Expenses	
Period Covered	\$0 00
 Sub-Total	<u>\$113 13</u>
Interest Calculated from through	<u>\$0 00</u>
Total Combined Expenses for Site and Interest	<u>\$113 13</u>

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
REMEDATION AND REDEVELOPMENT DIVISION

Date: 11/12/2009

Source: ERNIE

Cost Recovery Summary Report

Page: 1 of 1

Site Name Satterlee Sumpter Twp LF County Wayne

Site ID 82000048

Package 453321-00 Satterlee Sumpter Twp - GM Bankruptcy Post 6/1/09

Total for Employee Salaries and Wages		
Period Covered 06/01/2009 - 09/30/2009	\$991 80	
Indirect Dollars	\$161 56	
Sub-Total		\$1,153 36
Total for Employee Travel Expenses		
Period Covered		\$0 00
Contractual Expenses		
Period Covered	\$0 00	
Contract Sub-Total		\$0 00
Total for Miscellaneous Expenses		
Period Covered		\$0 00
MDNR/MDEQ Lab		
Period Covered		\$0 00
Total for MDPH/Community Health Expenses		
Alternate Water Supply		
Period Covered	\$0 00	
Bottled Water		
Period Covered	\$0 00	
MDPH/MDCH Lab		
Period Covered	\$0 00	
Sub-Total		\$0 00
Attorney General Expenses		
Period Covered 07/31/2009 - 09/30/2009		\$337 50
Other Expenses		
Period Covered		\$0 00
Sub-Total		\$1,490 86
Interest Calculated from through		\$0 00
Total Combined Expenses for Site and Interest		\$1,490.86
Run Date 11/12/2009		

UNITED STATES BANKRUPTCY COURT
SOUTHERN DISTRICT OF NEW YORK

IN RE

MOTORS LIQUIDATION COMPANY, et al, Chapter 11
f/k/a General Motors Corp, et al

Case No. 09-50026 (REG)

Debtors

(Jointly Administered)

AFFIDAVIT OF JACK SCHINDERLE

I Jack Schinderle, being first duly sworn, deposes and states as follows

1 I am an Environmental Manager employed by the Michigan Department of Environmental Quality ("MDEQ"), Waste and Hazardous Materials Division, in Lansing, Michigan I have been employed by the MDEQ since 1990

2 I have personal knowledge of the matters stated in this Affidavit and, if called as a witness, I could competently testify to the same

3 I am the supervisor of the unit that invoices and collects user charges authorized pursuant to Part 111, Hazardous Waste Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA)

4 The calculation of the user charges for General Motors Corporation (n/k/a Motors Liquidation Company - MLC) is based on generator status information provided by MLC or derived from hazardous waste activity at each site and manifest activity (manifest user charges) Certain MLC sites are also subject to a handler user charge as a hazardous waste treatment, storage or disposal facility (TSD)


5. The information used to calculate the handler user charges included on the attached table was pulled from the Waste Data System (WDS) and Michigan Manifest Tracking System (MMTS) databases. The information in these databases is continually updated. The information used to produce the handler user charges was extracted on November 16, 2009.

6. MLC is not being charged for manifests dated after July 10, 2009 for facilities that are known to have had ownership or operations transferred to General Motors Company.

7. The handler user charges for the 2009 calendar year attributed to thirty eight facilities identified on the attachment total \$18,400.00.

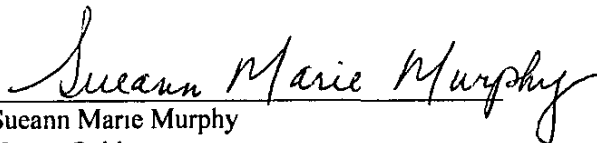
8. The manifest user charges for the 2009 calendar year attributed to the thirty eight facilities identified on the attachment for manifests shipments prior to June 1, 2009 is \$1,776.00.

9. The manifest user charges for the 2009 calendar year attributed to the thirty eight facilities identified on the attachment for manifests shipments after June 1, 2009 is \$792.00.



Jack Schinderle
Waste and Hazardous Materials Division
Michigan Department of Environmental Quality

Subscribed and sworn before me this 24th day of November, 2009.



Sueann Marie Murphy
Notary Public
Isabella County, Michigan
My Commission Expires March 5, 2013
Acting in the County of Ingham, Michigan

SUEANN MARIE MURPHY
NOTARY PUBLIC - STATE OF MICHIGAN
COUNTY OF ISABELLA
My Commission Expires Mar 5, 2013
Acting in the County of Ingham

Attachment to Affidavit of Jack Schinderle

Site ID Number	Address	City	Status	Handler User Charge	Manifests Pre June1	Manifests Post June
MID005356712	902 E LEITH ST	FLINT	LOG, TSD	\$2,400	\$48	\$40
MID005356860	1245 E COLDWATER RD	FLINT	LOG, TSD	\$2,400	\$0	\$8
MID005356738	4300 S SAGINAW	FLINT	LOG	\$100	\$0	\$0
MID005356888	1001 WOODSIDE AVE	BAY CITY	LOG	\$400	\$48	\$56
MID005356928	401 N VERLINDEN AVE	LANSING	LOG	\$400	\$16	\$0
MID980700827	2800-2801WEST SAGINAW ST	LANSING	LOG	\$100	\$32	\$0
MID005356902	2100 S OPDYKE RD	PONTIAC	LOG	\$400	\$128	\$72
MID980568836	200 SOUTH BLVD W	PONTIAC	LOG	\$100	\$0	\$0
MID005356886	220 E COLUMBIA AVE	PONTIAC	LOG	\$400	\$256	\$136
MID085470102	701 N GLENWOOD AVE	PONTIAC	LOG	\$400	\$0	\$0
MID005356910	900 BALDWIN AVE	PONTIAC	LOG, TSD	\$2,400	\$0	\$0
MID076331289	1251 JOSLYN AVE	PONTIAC	LOG	\$100	\$8	\$8
MID005356621	13000 ECKLES RD	LIVONIA	LOG	\$100	\$8	\$0
MID000718874	12200 MIDDLEBELT RD	LIVONIA	LOG	\$100	\$8	\$16
MID980587893	2930 ECORSE RD	YPSILANTI	LOG	\$400	\$24	\$16
MIK468293311	2901 TYLER RD	YPSILANTI	LOG	\$400	\$8	\$8
MID006020408	300 36TH ST SW	GRAND RAPIDS	LOG	\$100	\$16	\$32
MID005356944	10800 S SAGINAW ST	GRAND RAPIDS	LOG	\$100	\$8	\$24
MID000809905	36880 ECORSE RD	ROMULUS	LOG	\$400	\$56	\$24
MID000718544	4555 GIDDINGS RD	LAKE ORION	LOG	\$400	\$88	\$32
MID005356951	G3100 VAN SLYKE RD	FLINT	LOG	\$400	\$424	\$72
MID005356894	920 TOWNSEND ST	LANSING	LOG	\$400	\$104	\$32
MID082220757	3300 GENERAL MOTORS RD	MILFORD	LOG	\$400	\$56	\$24
MID000718536	50000 ECORSE RD	BELLEVILLE	LOG	\$100	\$8	\$0
MIK135678852	4134 DAVISON RD	BURTON	LOG	\$100	\$0	\$0
MIR000100313	8175 MILLETT HWY	LANSING	LOG	\$400	\$48	\$16
MID065468965	4400 W MOUNT HOPE HWY	LANSING	LOG	\$100	\$16	\$16
MID041793340	1629 N WASHINGTON AVE	SAGINAW	LOG, TSD	\$2,400	\$24	\$32
MID980795488	2500 E GENERAL MOTORS BLVD	DETROIT	LOG	\$400	\$112	\$32
MID003906773	6060 W BRISTOL RD	FLINT	LOG	\$400	\$32	\$32
MID005356621	13000 ECKLES RD	LIVONIA	LOG	\$400	\$0	\$0
MID005356811	23500 MOUND RD	WARREN	LOG	\$100	\$8	\$0
MID050615996	6250 CHICAGO RD	WARREN	LOG	\$400	\$104	\$32
MID058810961	2901 TYLER RD	YPSILANTI	LOG	\$100	\$16	\$0
MID082220757	3300 GENERAL MOTORS RD	MILFORD	LOG	\$400	\$40	\$8
MIK928886431	1870 TECHNOLOGY DRIVE	TROY	LOG	\$100	\$16	\$8
MIR000040014	30240 OAK CREEK DR	WIXOM	LOG	\$100	\$8	\$16
MIR000036293	2885 TYLER RD	YPSILANTI	LOG	\$100	\$8	\$0
				\$18,400	\$1,776	\$792

UNITED STATES BANKRUPTCY COURT
SOUTHERN DISTRICT OF NEW YORK

IN RE:

MOTORS LIQUIDATION COMPANY, et al,
f/k/a General Motors Corp., et al.

Chapter 11

Case No. 09-50026 (REG)

Debtors.

(Jointly Administered)

AFFIDAVIT OF SUSAN KAELEBER-MATLOCK

I, Susan Kaelber-Matlock, first being duly sworn, depose and say:

1. I am employed as a Senior Geologist for the Remediation and Redevelopment Division (RRD) of the Michigan Department of Environmental Quality (MDEQ) in the Saginaw Bay District Office, Bay City, Michigan. I have been employed by the MDEQ for twenty four years and in the Senior Geologist position for the past twenty years. As a Senior Geologist, I have also acted as the Project Manager and geologist for several large and technically complex sites of environmental contamination.

2. I make this affidavit on personal knowledge acquired during the course of my employment and, if called as a witness, could competently testify.

3. As a Senior Geologist and Project Manager with RRD, I am involved in coordination with other state, local, and federal agencies and other divisions of the MDEQ. I provide technical assistance for other MDEQ staff, environmental consultants, communities, and the public; ensure consistency through standardized interpretation and application of the rules, policies, and procedures; and assist in establishing procedures and policies.

4. As a Project Manager, my responsibilities include overseeing the identification, investigation, and evaluation of sites where hazardous materials have been released into the environment. I review response actions conducted by private parties to determine compliance with state environmental regulations, including hydrogeological investigations, interim response actions, and remedial action plans. In addition, I coordinate my review of sites of environmental contamination with toxicologists and compliance and enforcement staff.

5. I am the Project Manager and Senior Geologist for the Saginaw Malleable Iron (SMI) Plant Property and the adjacent Greenpoint Landfill in Saginaw, Michigan. The northern portion of the property includes the former General Motors (GM) foundry and support areas and is currently owned by Motors Liquidation Company (MLC). The southern portion of the property includes the Greenpoint Landfill and the property is owned by REALM. There is a Consent Judgment, No 98-22686-CE-2, entered on March 16, 1998, between the Department of Attorney General, the Department of Environmental Quality, General Motors, and Waste Management,

Inc. for the entire facility. There is also an approved Limited Remedial Action Plan for Saginaw Malleable/Greenpoint Landfill, Saginaw County, Michigan, dated July 30, 2008 and subsequent modifications December 31, 2008. This property is referred to in the MDEQ files as SMI, located at 77 West Center Road in Saginaw, Michigan. I have been the Project Manager for this facility since 1989.

The SMI facility includes areas of environmental contamination relating to free phase liquids, polychlorinated biphenyl compounds (PCBs), and metals. There are groundwater/oil collection systems currently in place to address free phase liquids in two areas of the facility. With other activities, groundwater monitoring and operation and maintenance related to the SMI and Greenpoint Landfill remain to be completed. The remedial costs were estimated based on the information known regarding this property.

Using my best professional judgment, the total estimated future cost for the response actions needed to address the environmental conditions at the northern portion of the SMI facility pursuant to the Consent Judgment, RAP, and Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, is likely to exceed \$7,000,000. Please see Attachment 1 for details.

Using my best professional judgment, the total estimated future cost for the response actions needed to address the environmental conditions at the southern portion of the SMI facility including Greenpoint Landfill per the terms of the Consent Judgment, RAP, and Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, is likely to exceed \$2,000,000. Please see Attachment 2 for details.

6. I am the Project Manager for the General Motors Powertrain Plant (GMPT), including the operating portion of the facility; the Machine Storage Area (MSA) and Crotty Street Channel; and the undeveloped portion of the site, now referred to as the Golson Wetland Park, in Bay City, Michigan. There is a 1999 legal agreement with MDEQ, MDEQ Reference No. LANDUSE-ERD-99-006, that was entered into subsequent to the 1992 Consent Judgment, No. 92-3740-CE, between the Department of Attorney General, the Department of Environmental Quality, and GM, for this facility. There is also an approved RAP, General Motors Powertrain-Bay City Remedial Action Plan, dated June 18, 1998, for this facility. Property ownership of the central portion of the facility, including the currently operating plant, support areas, and parking lots, was acquired by General Motors Company and this area was not included in the cost estimates. The property known as the undeveloped area in the Consent Judgment and RAP, now known as the Golson Wetland Park, is currently owned by the City of Bay City. It was formerly owned by General Motors, during which time the releases occurred. The property known as the Machine Storage Area and Crotty Street Channel in the Consent Judgment and RAP were originally owned by GM (during which time the releases occurred), and is currently owned by REALM. The entire property is referred to in the MDEQ files as GMPT, located at 1001 Woodside Avenue, in Bay City, Michigan. I have been the Project Manager for this facility since 1986.

The environmental contaminants, primarily PCBs, found in the MLC portion of the facility, the Machine Storage Area and Crotty Street Channel, have been contained in place and isolated from

the adjacent Saginaw River and are included in the RAP and Consent Judgment for this facility. Ongoing operation and maintenance activities include groundwater purge and treat system, groundwater monitoring, and cap maintenance.

Using my best professional judgment, the total estimated future cost for the response actions needed to address the environmental conditions at the Machine Storage Area and the Crotty Street Channel per the Consent Judgment, RAP, and Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, is likely to exceed \$5,000,000. This includes an estimate of \$3,500,000 for replacement of the sheetpiling. The sheetpiling has an expected life span of 40-50 years and has been in place for almost 10 years. Please see attachment 3 for details.

The undeveloped area, now known as Golson Wetland Park, is currently owned by the City of Bay City, but is part of the GMPT Consent Judgment and the RAP that addresses the entire GMPT facility. Activities left to be completed at the site include groundwater monitoring and cap maintenance.

Using my best professional judgment, the total estimated future cost for the response actions needed to address the environmental conditions at the Golson Wetland Park per the Consent Judgment, RAP, and Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, is likely to exceed \$1,000,000. Please see attachment 4 for details.

7. I am the Senior Geologist for the Plant Two Peninsula property, known in the GM bankruptcy documents as the Delphi Saginaw Plant 2 Landfill, Saginaw, Michigan. The property is owned by REALM. This property is referred to in the MDEQ files as the Delphi Plant 2 peninsula property and is located adjacent, and south of the Plant 2 property at 1400 Holmes, in Saginaw, Michigan. I have been the Senior Geologist for this facility since 1988.

The MLC estimate only includes actions that will be necessary to address the selenium contamination at this facility. MLC considers the other contaminants to be the responsibility of Delphi Corporation. The MDEQ disagrees with this assessment since the contaminants came to be located at this facility during the time of GM ownership. The Delphi Plant Two peninsula property also includes areas of environmental contamination relating to groundwater migration and potential dumping from the Delphi Plant Two facility. Environmental concerns at the site include PCBs, volatile organic compounds, and metals in concentrations that exceed the Part 201 criteria. Investigation and remedial costs were estimated based on the information known regarding this property.

Using my best professional judgment, the total estimated future cost for the response actions needed to address all the environmental conditions at this site in accordance with Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, is likely to exceed \$7,000,000. Please see attachment 5 for details.

8. I am the Senior Geologist for the Delphi Garey and Owen Road Warehouse, known

in the GM bankruptcy documents as the Former Howard Warehouse at 700 Garey Street in Saginaw, Michigan. The property was originally owned by GM, during which time releases occurred and is now owned by REALM. This property is referred to in the MDEQ files as the Delphi Garey and Owen Road Warehouse, 1700 Owen Road, Saginaw, Michigan. I have been the Senior Geologist for this facility since 1988.

The Delphi Garey and Owen Road Warehouse site includes an area of environmental contamination relating to the use of an underground tank which has been removed. Investigation and remedial costs were estimated based on the information known regarding this property.

Using my best professional judgment, the total estimated future cost for the response actions needed to address the environmental conditions at this site under Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, is likely to exceed \$200,000. Please see attachment 6 for details.

9 I am the Project Manager for the Bay City Middleground Landfill in Bay City, Michigan. This property is currently owned by the City of Bay City. GM used the landfill for disposal from the late 1950s until it was closed in 1986, and was a large contributor of PCB wastes to the landfill. There is a Consent Judgment, No. 98-3513-CE-B, entered on October 6, 1998, between the Department of Attorney General, the Department of Environmental Quality, GM, the City of Bay City and Prestolite Company, now Honeywell Corporation. The property is referred to in the MDEQ files as the Middlegrounds Landfill, located on Evergreen Road in Bay City, Michigan. I have been the Project Manager for this facility since 1986.

The Middleground Landfill has an approved RAP, titled Remedial Action Plan for the Bay City Middleground Landfill, Bay County, Michigan, dated December 2008. Substantial interim response activities have already been completed at this facility, however building demolition, groundwater and air monitoring, and operation and maintenance activities associated with the landfill, remain to be completed. The remedial costs were estimated based on the information known regarding this property.

Using my best professional judgment, the total estimated future cost for the response actions needed to address the environmental conditions at Middleground Landfill per the Consent Judgment, RAP, and Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, is likely to exceed \$3,000,000. See attachment 7 for details.

10 I am the Senior Geologist for the Delphi Plant Two facility in Saginaw, Michigan. The Delphi Plant Two facility has been owned by Delphi Corporation since 1999. The releases occurred during the time of GM ownership prior to 1999. This property is referred to in the MDEQ files as Delphi (GM) Saginaw Division Plant Two, located at 1400 Holmes, in Saginaw, Michigan. I have been the Senior Geologist for this facility since 1988.

The Delphi Plant Two facility includes areas of environmental contamination relating to underground pits, processes, and operations at the plant. There are free phase liquids present in several locations on the property that contain PCBs and volatile organic compounds in

concentrations that exceed the Part 201 criteria. There are oil recovery systems currently operating at the facility. Investigation and remedial costs were estimated based on the information known regarding this property.

Using my best professional judgment, the total estimated future cost for the response actions needed to address the environmental conditions at Delphi Plant Two per Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, is likely to exceed \$25,000,000. An previous estimate was provided in the Delphi bankruptcy filing. The current estimate is significantly larger than previous estimates due to the need for source control at this facility. Delphi has been attempting to recover free product at this site for some time, but progress has been hampered by the presence of basements, tunnels, and other underground structures which were not addressed during the building demolition. The MDEQ considers that excavation is the most effective means of addressing the site. See attachment 8 for more details.

11. I am the Senior Geologist for the Delphi Energy and Chassis Operations located at 2328 East Genesee Avenue, Saginaw, Michigan. The property was owned by GM prior to 1999 during which time releases occurred, and from that time until recently, was owned by Delphi Corporation. The site is currently owned by TRW and TRW did submit a Baseline Environmental Assessment in 2008 prior to the acquisition of the property. The environmental conditions at this site are currently being addressed by Delphi Corporation. This property is referred to in the MDEQ files as Delphi Chassis in Saginaw, Michigan. I have been the Senior Geologist for this facility since 1988.

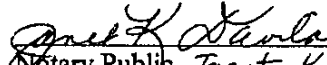
The Delphi Chassis facility includes areas of environmental contamination relating to underground pits, processes, and operations at the plant. The contaminants in the soil and groundwater include free phase liquids and PCBs. There is a groundwater purge and treat system at the facility. Investigation and remedial costs were estimated based on the information known regarding this property.

Using my best professional judgment, the total estimated future cost for the response actions needed to address the environmental conditions at Delphi Energy And Chassis Operations per Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, is likely to exceed \$1,500,000. See attachment 9 for more details.

12. The estimated costs provided above were developed assuming that the State of Michigan conducts all remedial activities at the facility. Additional unknown environmental conditions may exist at the facility that could significantly increase the future response costs.


Susan Kaelber-Matlock

Subscribed and sworn to before me
this 24th day of November, 2009.


Notary Public Janet K. Davila, Midland Co.,
Acting in and for Brewster County
My Commission Expires: 9/24/12

**GM/Delphi Part 201 Cost Comparisons
Sue Kaelber-Matlock, MDEQ-Bay City**

Attachment	Property	Address	GM signee to Consent Judgment	DEQ Estimate	Comments
	MLC-owned property				
1	Saginaw Malleable Iron	77 Center, Saginaw	yes, part of SMI CJ, with Waste Management, Inc	\$7,219,255	RAP implementation
	REALM-owned property				
2	Greenpoint Landfill, including the Eastern Extension Property	3300 Salt St, Saginaw	yes, part of SMI CJ, with Waste Management, Inc	\$2,292,616	RAP implementation
3	GMPT-Bay City (MLC property)	1001 Woodside Ave, Bay City	yes, part of GMPT RAP and CJ	\$5,984,946	RAP implementation, includes \$3,500,000 for sheetpiling replacement
5	Delphi Landfill (peninsula)	79 W Center, Saginaw	no	\$7,453,618	monitoring
6	Howard Warehouse (Owen Rd Warehouse)	700 Garey St, Saginaw	no	\$240,240	excavation
	Property not owned by MLC, but GM was liable				
4	Golson wetland, property owned by Bay City	Johnson St, Bay City	yes, part of GMPT RAP and CJ	\$1,113,971	RAP implementation
7	Middlegrounds Landfill (property owned by Bay City)	Evergreen Rd, Bay City	yes, CJ with Honeywell & city of Bay City	\$3,416,147	RAP implementation
8	Delphi Plant 2 (Delphi owned property)	1400 Holmes St, Saginaw	no	\$25,817,134	excavation
9	Delphi Chassis (property owned by TRW)	2328 Genesee, Saginaw	no	\$1,555,639	excavation and groundwater recovery
	Delphi Steering (property now owned by GMC)	3900 Holland Rd, Saginaw	no		
	GMPT -Bay City (GMC owned property)	Woodside Ave, Bay City	yes, part of GMPT RAP and CJ		

Attachment 1



Sue Kaelber-Matlock, MDEQ-Bay City

Michigan Department of Environmental Quality
Cost Table for Environmental Claims
Saginaw Malleable Iron
77 W Center, Saginaw

23-Nov-09

Not including Greenpoint Landfill, property owned by MLC, facility has an approved RAP and Consent Judgment building demolition is underway
Site needs include groundwater monitoring, cap maintenance, soil grubbing and restoration along Saginaw River, soil and concrete removal under foundation, LNAPL recovery at 2 locations, deed restrictions and permanent markers,

Groundwater Monitoring				
Need	# of Units	Unit Cost	Total	
1 Geo Probe and crew for 7 borings incl. temp. wells (per day)		\$3,000.00	\$0.00	
2 Soil Samples (2 per boring)				
A Full Scan		\$1,157.00	\$0.00	
B VOCs only		\$110.00	\$0.00	
C SVOCs only		\$221.00	\$0.00	
D Metals only		\$184.00	\$0.00	
E PCBs only		\$221.00	\$0.00	
3 Water Samples (annual monitoring at 27 existing wells for 30 yrs)				
A Full Scan		\$1,157.00	\$0.00	
B VOCs only		\$110.00	\$0.00	
C SVOCs only		\$221.00	\$0.00	
D Metals only (27 wells for 30 yrs)	810	\$184.00	\$149,040.00	
E PCBs only (27 wells for 30 yrs)	810	\$221.00	\$179,010.00	
4 Consultant Oversight (per day) (3 month O&M contract for 30 yrs)	1800	\$600.00	\$1,080,000.00	
5 Investigation Report (US) (gw monitoring is part of O&M reporting)		\$3,000.00	\$0.00	
6 15% Contingency			\$211,207.50	
7 State Oversight Costs (5%)			\$80,962.88	
Total Site Assessment Cost:			\$1,700,220.38	

Attachment 1

Building Demolition				
		# of Units	Unit Cost	Total
1	Need 3 area of 100x100 concrete slab removed		\$45.00	\$0.00
2	Asbestos Abatement includes air monitoring and disposal (per linear ft. of pipe)			
	Transformer Removal			
	A - Disposal Non-PCB Transformer Oil incl transportation (per gal)		\$0.65	\$0.00
	B - Disposal PCB Transformer Oil incl transportation (per gal)		\$4.56	\$0.00
3	Bldg Demo includes Trucking and Disposal (per CF building standing)		\$0.37	\$0.00
4	Ordered Demolition (per CF of building standing)		\$0.65	\$0.00
5	Bldg Slab Demo includes Trucking and Disposal (per SF of building slab) (several areas of contaminated)	30000	\$6.30	\$189,000.00
6	Consultant Oversight (per day)		\$600.00	\$0.00
7	15% Contingency			\$28,350.00
8	State Oversight Costs (5%)			\$10,867.50
	Building Demolition total:			\$228,217.50

Attachment 1

Soil Removal			
		# of Units	Unit Cost
Need: 3' area of 100x100' concrete slab removed, soil removal 10' deep			
1	Soil Excavation and Disposal	11111	\$50.00
	A Non-Hazardous Soil (per cubic yard)		\$555,550.00
	B Hazardous Soil (per cubic yard)		\$0.00
2	Confirmation Sampling (9 samples per 3 excavations)		
	A Full Scan ²		\$1,157.00
	B VOCs only		\$110.00
	C SVOCs only		\$221.00
	D Metals only		\$184.00
	E PCBs only	27	\$221.00
3	Backfill and Compaction (per cubic yard)	11111	\$20.00
4	Consultant Oversight (per day) (6 month concrete and soil removal contract, bid to report)	120	\$600.00
	Excavation Report	1	\$3,000.00
5	15% Contingency		\$128,360.55
6	State Oversight Costs (5%)		\$49,354.88
Total			\$1,036,452.43

Attachment 1

Soil Vapor Extraction System				
Need	System	# of Units	Unit Cost	Total
1	Soil Vapor Extraction System (Lump Sum)			
	Construction Specifications (Lump Sum)		\$ 9,000 00	\$0 00
	Cleaning & Grubbing (per acre)		\$ 4,725 00	\$0 00
	SVE Well Installation (per well; avg 6' deep) ⁶		\$ 600 00	\$0 00
	Collection Trench Excavation (per linear foot, 24" wide, 2' deep) ⁷		\$ 60 00	\$0 00
	Piping Installation (per linear foot)		\$ 30 00	\$0 00
	Non-Haz Contaminated Soil Transport and Disposal (CY of well and trench spoil)		\$ 50 00	\$0 00
	General Backfill for Trench (per CY, from 2' to 0' bgs)		\$ 20 00	\$0 00
	Cat-Ox unit rental (monthly)		\$ 7,500 00	\$0 00
	2000 lb Granular Activated Carbon Unit		\$ 6,000 00	\$0 00
	Purchase New Carbon for 30 months of operation @ \$1 25/lb ⁸		\$ 2,500 00	\$0 00
	Dispose of Waste Carbon for 30 months of operation @ \$2 00/lb ⁸		\$ 4,000 00	\$0 00
	Blower		\$ 10,000 00	\$0 00
	SVE Trailer		\$ 20,000 00	\$0 00
	O&M (Years)		\$ 25,000 00	\$0 00
	Submittals (Lump Sum) for Monthly or Quarterly Reports		\$ 10,000 00	\$0 00
	Verification of Soil Remediation Samples		\$ 150 00	\$0 00
	Electrical (lump sum)		\$ 10,000 00	\$0 00
	Mechanical (lump sum)		\$ 15,000 00	\$0 00
	Start up & Trouble Shoot		\$ 15,000 00	\$0 00
	Site Restoration		\$ 12,000 00	\$0 00
	Verification of Soil Remediation Samples		\$ 150 00	\$0 00
2	Consultant Oversight (per day)		\$ 600 00	\$0 00
3	15% Contingency			\$0 00
4	State Oversight Costs (5%)			\$0 00
Total Soil Vapor Extraction Cost:				\$0 00

Attachment 1

Groundwater Removal			
Need		# of Units	Unit Cost
1 Groundwater pumping to Frac Tank			
A 8 hours of pumping, Manned (per day)			\$1,760 00
B Frac Tank Delivery (per hour) - Assume 8 hours unless known			\$95 00
C Frac Tank Rental - 21,000 gal (per week)			\$266 00
D Frac Tank Decon (per hour) - Assume 8 hours unless known			\$145 00
2 Groundwater Disposal			
A Waste Water Characterization			
1) Full Scan ²			\$1,157 00
2) VOCs only			\$110 00
3) SVOCs only			\$221 00
4) Metals only			\$184 00
5) PCBs only			\$221 00
B Disposal Non-Hazardous Groundwater incl transportation (per gallon) ⁹			\$0 65
C Disposal Hazardous Groundwater (per gallon)			\$4 56
3 Groundwater Monitoring Wells			\$450 00
4 Groundwater Confirmation Sampling			
A Full Scan ²			\$1,157 00
B VOCs only			\$110 00
C SVOCs only			\$221 00
D Metals only			\$184 00
E PCBs only			\$221 00
5 Consultant Oversight (per day)			\$600 00
6 15% Contingency			
7 State Oversight Costs (5%)			
Total Groundwater Removal Cost			\$0 00

Attachment 1

Groundwater Treatment System			
Need		# of Units	Unit Cost Total
1 Groundwater Collection System Installation ¹⁰			
Cleaning & Grubbing (per acre) area along Saginaw River		3	\$ 4,725.00 \$14,175.00
Collection Trench Excavation (per linear foot, 36" wide, 8' deep)			\$ 100.00 \$0.00
Non-Haz Contaminated Soil Transport and Disposal (Cubic Yard or CY)			\$ 50.00 \$0.00
Pea Gravel for Trench Backfill (per CY, from 8' to 4' bgs)			\$ 20.00 \$0.00
General Backfill for Trench (per CY, from 4' to 0' bgs)			\$ 20.00 \$0.00
Groundwater Well/Sump Installation (per well, whole crew, incl well installation)			\$ 3,000.00 \$0.00
Groundwater Recovery Pumps (per well, incl installation)			\$ 3,000.00 \$0.00
Air Compressor (10 Hp for pumps)			\$ 7,500.00 \$0.00
Piping Installation (per linear foot)			\$ 30.00 \$0.00
Co-Precipitation Remediation System - Purchase			\$248,000.00 \$0.00
Co-Precipitation Remediation System Installation			\$ 66,000.00 \$0.00
Treatment System Trailer - Purchase			\$ 20,000.00 \$0.00
Liquid Phase GAC Vessels for Carbon (1000 Lbs Capacity) - Purchase			\$ 3,500.00 \$0.00
Mechanical			\$ 18,000.00 \$0.00
Electrical			\$ 18,000.00 \$0.00
Sewer Connection & Permitting			\$ 15,000.00 \$0.00
Start up & Trouble Shoot			\$ 15,000.00 \$0.00
Site Restoration			\$ 15,000.00 \$0.00
2 Consultant Oversight (per day)		3	\$ 12,000.00 \$36,000.00
3 15% Contingency			\$600.00 \$0.00
4 State Oversight Costs (5%)			\$7,526.25
Total Groundwater Treatment Cost:			\$2,885.06
			\$60,586.31

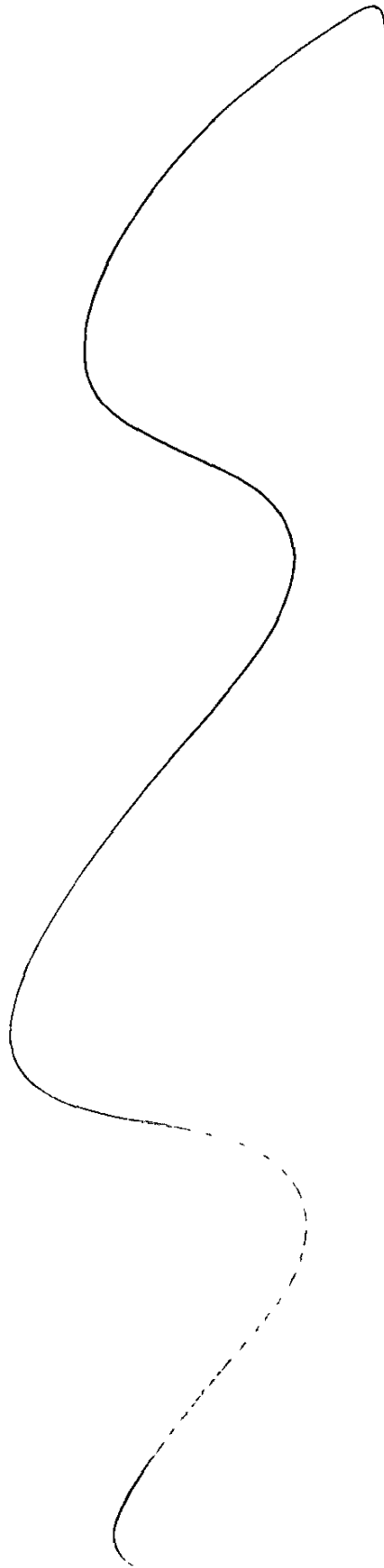
Groundwater System Monitoring and Operation and Maintenance for 10 Years ¹¹			
Need		# of Units	Unit Cost Total
1 System O&M (2 LNAPL recovery systems continuing for 30 years)			
Utilities (per year)		30	\$ 4,500.00 \$135,000.00
Wastewater Discharge (\$1 22780 gallons)			\$ 12,000.00 \$0.00
Purchase of new carbon (1000 lbs per month @\$1 25/lb) Yearly amount is unit cost (2x/yr for 30 yrs)		60	\$15,000.00 \$900,000.00
Dispose of Carbon & Change Out (1000lbs/month @ \$2/lb) (2x/yr for 30 yrs)		60	\$ 24,000.00 \$1,440,000.00
Sludge Disposal (4 ton/month @ \$300/ton, only for sludge from Co-precipitation) Yearly amount is unit cost			\$ 14,400.00 \$0.00
Monitoring - Materials - Yearly amount is unit cost (30 years)		30	\$ 1,500.00 \$45,000.00
Reporting - Yearly amount is unit cost (O&M report annually for 30 yrs)		30	\$ 3,500.00 \$105,000.00
Post Remediation Monitoring - Yearly amount is unit cost- (cap maintenance and erosion control for 30 yrs)		30	\$ 8,500.00 \$255,000.00
well abandonment		130	\$1,500 \$195,000.00
Deed restrictions (\$5,000) and permanent markers (\$10,000)			\$15,000.00
2 15% Contingency			\$432,000.00
3 State Oversight Costs (5%)			\$176,100.00
Total Groundwater Monitoring and Maintenance and Operation Cost:			\$3,698,100.00

Attachment 1

Miscellaneous Project Tasks			
1	Bid Documents and Contractor Procurement (annual O&M contracts for 30 yrs + excavation contract)	31	\$5,000.00
2	Contractor Mobilization (5% of total project cost)		\$336,178.83
3	Closure Report (LS)		\$4,500.00
Total Miscellaneous Project Tasks:			\$495,678.83

Total for Site Remediation: \$7,219,255.45

- ¹ Assume 50 feet btw borings
- ² If contaminant is unknown run "full scan"
- ³ SF of building multiplied by estimated height
- ⁴ If no Asbestos Survey has been completed, assume ordered demo of building
- ⁵ Assumed reinforced concrete
- ⁶ For sandy soil, assume 15' radius of influence, with wells 30' apart to cover entire plume
- ⁷ Measure distance to central location for SVE trailer from each well
- ⁸ First year - monthly, second year quarterly and remaining half year quarterly
- ⁹ Assume 1' of groundwater in bottom of entire excavation - Multiply excavation volume by 7.48 for estimated gallons
- ¹⁰ Trench installed width of plume on leading edge Use 0's in unit column if no groundwater remediation system
- ¹¹ Use only if "Groundwater Treatment" is chosen over removal Use 10's in unit column for estimated 10 years of O&M



Attachment 2



Sue Kaelber-Matlock, MDEQ-Bay City

Michigan Department of Environmental Quality
Cost Table for Environmental Claims
Greenpoint Landfill
3300 Salt St, Saginaw

23-Nov-09

part of SMI RAP and SMI Consent Judgment, owned by REALM
Needs - annual monitoring of 13 wells for 30 years, cap maintenance, deed restrictions, markers south of LF, disconnect pipe and remove area of contaminated soils, verification samples east of landfill, need deed restrictions on East Extension property, owned by REALM

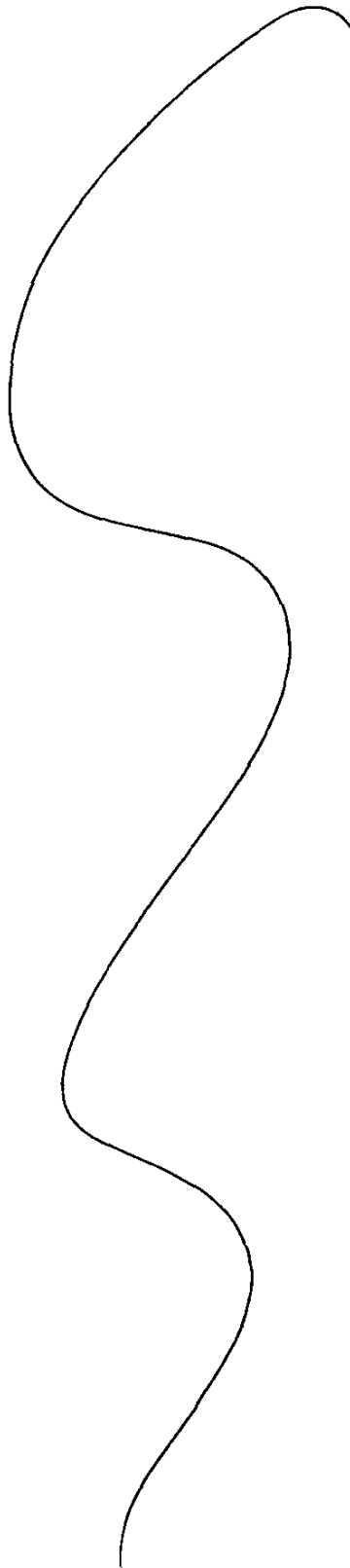
Site Assessment				
Need		# of Units	Unit Cost	Total
1 GeoProbe and crew for borings incl. temp. wells (per day)			\$3,000.00	\$0.00
2 Soil Samples (2 per boring)				
A Full Scan		1	\$1,157.00	\$0.00
B VOCs only		1	\$110.00	\$0.00
C SVOCs only		1	\$221.00	\$0.00
D Metals only		1	\$184.00	\$0.00
E PCBs only		1	\$221.00	\$0.00
3 Water Samples (1 per boring)				
A Full Scan (annual monitoring at 13 wells for 30 years)		390	\$1,157.00	\$451,230.00
B VOCs only			\$110.00	\$0.00
C SVOCs only			\$221.00	\$0.00
D Metals only			\$184.00	\$0.00
E PCBs only			\$221.00	\$0.00
4 Consultant Oversight (per day) (40 days from bid to report x 30 yrs)		1200	\$600.00	\$720,000.00
5 Investigation Report (LS)		30	\$3,000.00	\$90,000.00
6 15% Contingency				\$189,184.50
7 State Oversight Costs (5%)				\$72,520.73
Total				\$1,522,935.23

Attachment 2

Building Demolition				
Need		# of Units	Unit Cost	Total
1 Asbestos Abatement includes air monitoring and disposal (per linear ft. of pipe)			\$45.00	\$0.00
2 Transformer Removal				
A Disposal Non-PCB Transformer Oil incl transportation (per gal)			\$0.65	\$0.00
B Disposal PCB Transformer Oil incl transportation (per gal)			\$4.56	\$0.00
3 Bidg. Demo Includes Trucking and Disposal (per CF building standing)			\$0.37	\$0.00
4 Ordered Demolition (per CF of building standing)			\$0.65	\$0.00
5 Bidg. Slab Demo Includes Trucking and Disposal (per SF of building slab)			\$6.30	\$0.00
6 Consultant Oversight (per day)			\$600.00	\$0.00
7 15% Contingency				\$0.00
8 State Oversight Costs (5%)				\$0.00
Building Demolition Total:				\$0.00

Attachment 2

Soil Removal				
	Need to disconnect pipe and 1 time soil excavation			
	Soil Excavation and Disposal			
	A Non-Hazardous Soil (per cubic yard) 50x50x10 deep			
	B Hazardous Soil (per cubic yard)			
2	Confirmation Sampling			
	A Full Scan (verification samples)			
	B VOCs only			
	C SVOCs only			
	D Metals only			
	E PCBs only			
3	Backfill and Compaction (per cubic yard)			
4	Consultant Oversight (per day) (excavation contractor 4 months from bid to closure report)			
	Excavation Report (1 time)			
5	15% Contingency			
6	State Oversight Costs (5%)			
Total Soil Removal Cost				



Attachment 2

Soil Vapor Extraction System				
Need		# of Units	Unit Cost	Total
1 Soil Vapor Extraction System				
Construction/Specifications (Lump Sum)			\$ 9,000 00	\$0 00
Cleaning & Grubbing (per acre)			\$ 4,725 00	\$0 00
SVE Well Installation (per well, avg 6' deep) ⁶			\$ 600 00	\$0 00
Collection Trench Excavation (per linear foot, 24" wide, 2' deep) ⁷			\$ 60 00	\$0 00
Piping Installation (per linear foot)			\$ 30 00	\$0 00
Non-Haz Contaminated Soil Transport and Disposal (CY of well and trench spoil)			\$ 50 00	\$0 00
General Backfill for Trench (per CY, from 2' to 0' bgs)			\$ 20 00	\$0 00
Cat-Ox unit rental (monthly)			\$ 7,500 00	\$0 00
2000 lb Granular Activated Carbon Unit			\$ 6,000 00	\$0 00
Purchase New Carbon for 30 months of operation @ \$1 25/lb ⁸			\$ 2,500 00	\$0 00
Dispose of Waste Carbon for 30 months of operation @ \$2 00/lb ⁸			\$ 4,000 00	\$0 00
Blower			\$ 10,000 00	\$0 00
SVE Trailer			\$ 20,000 00	\$0 00
O&M (Years)			\$ 25,000 00	\$0 00
Submittals (Lump Sum) for Monthly or Quarterly Reports			\$ 10,000 00	\$0 00
Verification of Soil Remediation Samples			\$ 150 00	\$0 00
Electrical (lump sum)			\$ 10,000 00	\$0 00
Mechanical (lump sum)			\$ 15,000 00	\$0 00
Start up & Trouble Shoot			\$ 15,000 00	\$0 00
Site Restoration			\$ 12,000 00	\$0 00
Verification of Soil Remediation Samples			\$ 150 00	\$0 00
2 Consultant Oversight (per day)			\$ 600 00	\$0 00
3 15% Contingency				\$0 00
4 State Oversight Costs (5%)				\$0 00
Total Soil Vapor Extraction Cost:				\$0 00

Attachment 2

Groundwater Removal				
Need		# of Units	Unit Cost	Total
1	Groundwater pumping to Frac Tank			
A	8 hours of pumping, Manned (per day)	-	\$1,760.00	\$0.00
B	Frac Tank Delivery (per hour) - Assume 8 hours unless known	-	\$95.00	\$0.00
C	Frac Tank Rental - 21,000 gal (per week)	-	\$266.00	\$0.00
D	Frac Tank Decon (per hour) - Assume 8 hours unless known	-	\$145.00	\$0.00
2	Groundwater Disposal			
A	Waste Water Characterization	-	-	-
	1) Full Scan ²	-	\$1,157.00	\$0.00
	2) VOCs only	-	\$110.00	\$0.00
	3) SVOCs only	-	\$221.00	\$0.00
	4) Metals only	-	\$184.00	\$0.00
	5) PCBs only	-	\$221.00	\$0.00
B	Disposal Non-Hazardous Groundwater incl transportation (per gallon) ⁹	-	\$0.65	\$0.00
C	Disposal Hazardous Groundwater (per gallon)	-	\$4.56	\$0.00
3	Groundwater Monitoring Wells			
4	Groundwater Confirmation Sampling			
A	Full Scan ²	-	\$1,157.00	\$0.00
B	VOCs only	-	\$110.00	\$0.00
C	SVOCs only	-	\$221.00	\$0.00
D	Metals only	-	\$184.00	\$0.00
E	PCBs only	-	\$221.00	\$0.00
5	Consultant Oversight (per day)			
6	15% Contingency			
7	State Oversight Costs (5%)			
Total Groundwater Removal Cost:			\$600.00	\$0.00

Attachment 2

Groundwater Treatment System			
Need		# of Units	Unit Cost
1 Groundwater Collection System Installation			
Cleaning & Grubbing (per acre)			\$ 4,725 00
Collection Trench Excavation (per linear foot, 36" wide, 8' deep)			\$ 100 00
Non-Haz Contaminated Soil Transport and Disposal (Cubic Yard or CY)			\$ 50 00
Pea Gravel for Trench Backfill (per CY, from 8' to 4' bgs)			\$ 20 00
General Backfill for Trench (per CY, from 4' to 0' bgs)			\$ 20 00
Groundwater Well/Sump Installation (per well, whole crew, incl well installation)			\$ 3,000 00
Groundwater Recovery Pumps (per well, incl installation)			\$ 3,000 00
Air Compressor (10 Hp for pumps)			\$ 7,500 00
Piping Installation (per linear foot)			\$ 30 00
Co-Precipitation Remediation System - Purchase			\$248,000 00
Co-Precipitation Remediation System Installation			\$ 66,000 00
Treatment System Trailer - Purchase			\$ 20,000 00
Liquid Phase GAC Vessels for Carbon (1000 Lbs Capacity) - Purchase			\$ 3,500 00
Mechanical			\$ 18,000 00
Electrical			\$ 18,000 00
Sewer Connection & Permitting			\$ 15,000 00
Start up & Trouble Shoot			\$ 15,000 00
Site Restoration			\$ 12,000 00
2 Consultant Oversight (per day)			\$600 00
3 15% Contingency			\$0 00
4 State Oversight Costs (5%)			\$0 00
Total Groundwater Treatment Cost:			\$0 00

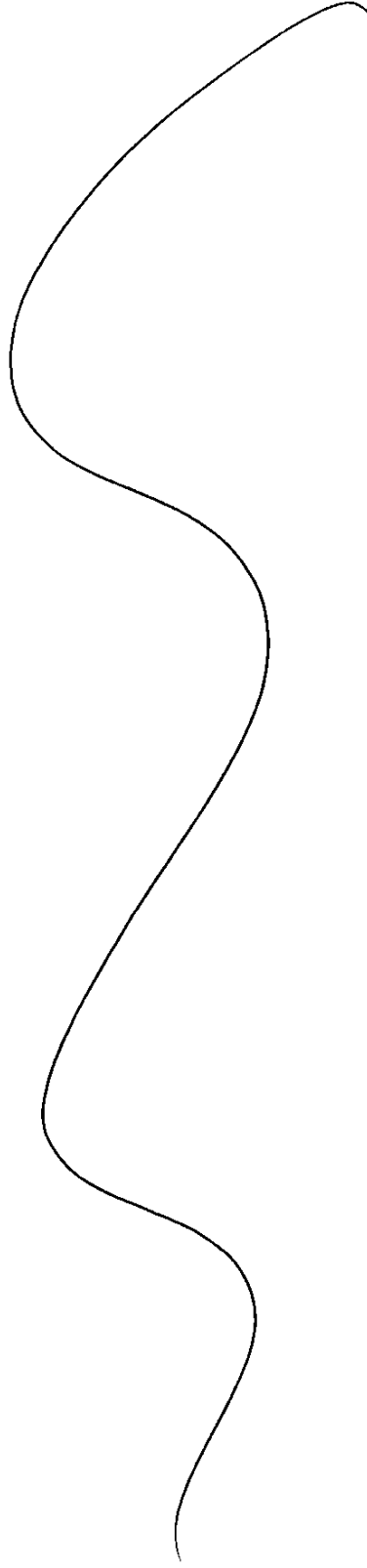
Groundwater System Monitoring and Operation and Maintenance for 30 Years			
Need		# of Units	Unit Cost
1 System O&M			
Utilities (per year)			\$ 4,500 00
Wastewater Discharge (\$1 22780 gallons)			\$ 12,000 00
Purchase of new carbon (1000 lbs per month @ \$1 25/lb) Yearly amount is unit cost			\$15,000 00
Dispose of Carbon & Change Out (1000lbs/month @ \$2/lb) - Hazardous Waste Yearly amount is unit cost			\$ 24,000 00
Sludge Disposal (4 ton/month @ \$300/ton; only for sludge from Co-precipitation) Yearly amount is unit cost			\$ 14,400 00
Monitoring - Materials - Yearly amount is unit cost (annual O&M for 30 yrs)			\$ 1,500 00
Reporting - Yearly amount is unit cost (30 yrs)			\$ 3,500 00
well abandonment		13	\$1,500
Post Remediation Monitoring (cap maintenance and erosion control for 30 yrs)		30	\$ 8,500 00
Deed restrictions (\$5,000 at 2 properties) Permanent markers (\$10,000)			\$255,000 00
2 15% Contingency			\$20,000 00
3 State Oversight Costs (5%)			\$41,175 00
Total Groundwater Monitoring and Maintenance and Operation Cost:			\$16,783 75
			\$352,458 75

Attachment 2

Miscellaneous Project Tasks			
1	Bid Docs/Contractor Procurement (excavation: 1 time and sampling annually for 30 yrs)	\$5,000.00	\$155,000.00
2	Contractor Mobilization (5% of total project cost)		\$101,576.95
3	Closure Report (LS)	\$4,500.00	\$4,500.00
Total Miscellaneous Project Tasks:			\$26,107.95

Total for Site Remediation **\$2,292,616.01**

- ¹ Assume 50 feet btw borings
- ² If contaminant is unknown run "full scan"
- ³ SF of building multiplied by estimated height
- ⁴ If no Asbestos Survey has been completed, assume ordered demo of building
- ⁵ Assumed reinforced concrete
- ⁶ For sandy soil, assume 15' radius of influence, with wells 30' apart to cover entire plume
- ⁷ Measure distance to central location for SVE trailer from each well
- ⁸ First year - monthly, second year quarterly and remaining half year quarterly
- ⁹ Assume 1' of groundwater in bottom of entire excavation - Multiply excavation volume by 7.48 for estimated gallons
- ¹⁰ Trench installed width of plume on leading edge Use 0's in unit column if no groundwater remediation system
- ¹¹ Use only if "Groundwater Treatment" is chosen over removal Use 10's in unit column for estimated 10 years of O&M



Attachment 3



Sue Kaelber-Matlock, MDEQ-Bay City

Michigan Department of Environmental Quality

Cost Table for Environmental Claims

GMPT Bay City

Woodside Ave, Bay City MID005356688

23-Nov-09

property owned by REALM (MSA and Crotty St channel)

part of approved RAP and Consent Judgment for GMPT-Bay City

Site needs include dewatering to maintain inward hydraulic gradient, gw disposal to GMPT WWTP, annual groundwater monitoring for 25 yrs, cap maintenance, sheetpile and deep soil mixing wall maintenance, deed restriction and permanent markers

Groundwater Monitoring			
Need	# of Units	Unit Cost	Total
1 GeoProbe and crew for 7 borings incl temp wells (per day)		\$3,000.00	\$0.00
2 Soil Samples (2 per boring)			
A Full Scan ²		\$1,157.00	\$0.00
B VOCs only		\$110.00	\$0.00
C SVOCs only		\$221.00	\$0.00
D Metals only		\$184.00	\$0.00
E PCBs only		\$221.00	\$0.00
3 Water Samples (35 existing wells)			
A Full Scan ²		\$1,157.00	\$0.00
B VOCs only		\$110.00	\$0.00
C SVOCs only		\$221.00	\$0.00
D Metals only		\$184.00	\$0.00
E PCBs only		\$221.00	\$0.00
F General Chemistry and Static Water Levels (annually at 35 wells for 25 yrs)	875	\$110.00	\$96,250.00
4 Consultant Oversight (per day) (3 months oversight for O&M; incl gw monitoring, annually for 25 yrs)	1500	\$600.00	\$900,000.00
5 Investigation Report (LS) (part of O&M contract)		\$3,000.00	\$0.00
6 15% Contingency			\$149,437.50
7 State Oversight Costs (5%)			\$57,284.38
Total Site Assessment Cost:			\$1,202,971.88

Attachment 3

Building Demolition				
Need		# of Units	Unit Cost	Total
1 Asbestos Abatement includes air monitoring and disposal (per linear ft. of pipe)			\$45.00	\$0.00
2 Transformer Removal				
A Disposal Non-PCB Transformer Oil incl transportation (per gal)			\$0.65	\$0.00
B Disposal PCB Transformer Oil incl transportation (per gal)			\$4.56	\$0.00
3 Bldg Demo includes Trucking and Disposal (per CF building standing)			\$0.37	\$0.00
4 Ordered Demolition (per CF of building standing)			\$0.65	\$0.00
5 Bldg Slab Demo includes Trucking and Disposal (per SF of building slab)			\$6.30	\$0.00
6 Consultant Oversight (per day)			\$600.00	\$0.00
7 15% Contingency				\$0.00
8 State Oversight Costs (5%)				\$0.00
Building Demolition Total:				\$0.00

Attachment 3

Soil Removal			
Need		# of Units	Unit Cost Total
1 Soil Excavation and Disposal			
A Non-Hazardous Soil (per cubic yard)			\$50 00 \$0 00
B Hazardous Soil (per cubic yard)			\$150 00 \$0 00
2 Confirmation Sampling			
A Full Scan			\$1,157 00 \$0 00
B VOCs only			\$110 00 \$0 00
C SVOCs only			\$221 00 \$0 00
D Metals only			\$184 00 \$0 00
E PCBs only			\$221 00 \$0 00
3 Backfill and Compaction (per cubic yard)			\$20 00 \$0 00
4 Consultant Oversight (per day)			\$600 00 \$0 00
5 15% Contingency			\$0 00 \$0 00
6 State Oversight Costs (5%)			\$0 00 \$0 00
Total Soil Removal Cost:			\$0:00

Attachment 3

Soil Vapor Extraction System			
Need		# of Units	Total
1 Soil Vapor Extraction System (Lump Sum)			
Construction Specifications (Lump Sum)			\$ 9,000 00
Clearing & Grubbing (per acre)			\$ 4,725 00
SVE Well Installation (per well, avg 6' deep) ⁶			\$ 600 00
Collection Trench Excavation (per linear foot, 24" wide, 2' deep) ⁷			\$ 60 00
Piping Installation (per linear foot)			\$ 30 00
Non-Haz Contaminated Soil Transport and Disposal (CY of well and trench spoil)			\$ 50 00
General Backfill for Trench (per CY, from 2' to 0' bgs)			\$ 20 00
Cat-Ox unit rental (monthly)			\$ 7,500 00
2000 lb Granular Activated Carbon Unit			\$ 6,000 00
Purchase New Carbon for 30 months of operation @ \$1 25/lb ⁸			\$ 2,500 00
Dispose of Waste Carbon for 30 months of operation @ \$2 00/lb ⁸			\$ 4,000 00
Blower			\$ 10,000 00
SVE Trailer			\$ 20,000 00
O&M (Years)			\$ 25,000 00
Submittals (Lump Sum) for Monthly or Quarterly Reports			\$ 10,000 00
Verification of Soil Remediation Samples			\$ 150 00
Electrical (lump sum)			\$ 10,000 00
Mechanical (lump sum)			\$ 15,000 00
Start up & Trouble Shoot			\$ 15,000 00
Site Restoration			\$ 12,000 00
Verification of Soil Remediation Samples			\$ 150 00
2 Consultant Oversight (per day)			\$ 600 00
3 15% Contingency			\$ 0 00
4 State Oversight Costs (5%)			\$ 0 00
Total Soil Vapor Extraction Cost			\$0 00

Attachment 3

Groundwater Removal			
Need	# of Units	Unit Cost	Total
1 Groundwater pumping to Frac Tank			
A 8 hours of pumping, Manned (per day)		\$1,760.00	\$0.00
B Frac Tank Delivery (per hour) - Assume 8 hours unless known		\$95.00	\$0.00
C Frac Tank Rental - 21,000 gal (per week)		\$266.00	\$0.00
D Frac Tank Decon (per hour) - Assume 8 hours unless known		\$145.00	\$0.00
2 Groundwater Disposal			
A Waste Water Characterization			
1) Full Scan ²		\$1,157.00	\$0.00
2) VOCs only		\$110.00	\$0.00
3) SVOCs only		\$221.00	\$0.00
4) Metals only		\$184.00	\$0.00
5) PCBs only		\$221.00	\$0.00
B Disposal Non-Hazardous Groundwater incl transportation (per gallon) ⁹		\$0.65	\$0.00
C Disposal Hazardous Groundwater (per gallon)		\$4.56	\$0.00
3 Groundwater Monitoring Wells			
		\$450.00	\$0.00
4 Groundwater Confirmation Sampling			
A Full Scan ²		\$1,157.00	\$0.00
B VOCs only		\$110.00	\$0.00
C SVOCs only		\$221.00	\$0.00
D Metals only		\$184.00	\$0.00
E PCBs only		\$221.00	\$0.00
5 Consultant Oversight (per day)		\$600.00	\$0.00
6 15% Contingency			\$0.00
7 State Oversight Costs (5%)			\$0.00
Total Groundwater Removal Cost:			\$0.00

Attachment 3

Groundwater Treatment System			
Need: Dewatering system already operating and pumping to adjacent GMPT WWTP	# of Units	Unit Cost	Total
1 Groundwater Collection System Installation			
Cleaning & Grubbing (per acre)		\$ 4,725 00	\$0 00
Collection Trench Excavation (per linear foot, 36" wide, 8' deep)		\$ 100 00	\$0 00
Non-Haz Contaminated Soil Transport and Disposal (Cubic Yard or CY)		\$ 50 00	\$0 00
Pea Gravel for Trench Backfill (per CY, from 8' to 4' bgs)		\$ 20 00	\$0 00
General Backfill for Trench (per CY, from 4' to 0' bgs)		\$ 20 00	\$0 00
Groundwater Well/Sump Installation (per well, whole crew, incl well installation)		\$ 3,000 00	\$0 00
Groundwater Recovery Pumps (per well, incl installation) (replace 1 pump/year for 30 years)	30	\$ - 3,000 00	\$90,000 00
Air Compressor (10 Hp for pumps)		\$ - 7,500 00	\$0 00
Piping Installation (per linear foot)		\$ 30 00	\$0 00
Co-Precipitation Remediation System - Purchase		\$248,000 00	\$0 00
Co-Precipitation Remediation System Installation		\$ 66,000 00	\$0 00
Treatment System Trailer - Purchase		\$ 20,000 00	\$0 00
Liquid Phase GAC Vessels for Carbon (1000 Lbs Capacity) - Purchase		\$ 3,500 00	\$0 00
Mechanical		\$ 18,000 00	\$0 00
Electrical		\$ 18,000 00	\$0 00
Sewer Connection & Permitting		\$ 15,000 00	\$0 00
Start up & Trouble Shoot		\$ 15,000 00	\$0 00
Site Restoration		\$ 12,000 00	\$0 00
2 Consultant Oversight (per day)		\$600 00	\$0 00
3 15% Contingency			\$13,500 00
4 State Oversight Costs (5%)			\$5,175 00
Total Groundwater Treatment Cost:			\$108,675 00

Attachment 3

Groundwater System Monitoring and Operation for 25 Years ¹¹			
Need		# of Units	Total
1 System O&M¹⁰			
Utilities (per year)		25	\$ 4,500.00
Wastewater Discharge (\$1.22/780 gallons)			\$ 12,000.00
Purchase of new carbon (1000 lbs per month @ \$1.25/lb) Yearly amount is unit cost			\$ 15,000.00
Dispose of Carbon & Change Out (1000lbs/month @ \$2/lb) - Hazardous Waste Yearly amount is unit cost			\$ 24,000.00
Sludge Disposal (4 ton/month @ \$300/ton, only for sludge from Co-precipitation) Yearly amount is unit cost			\$ 14,400.00
Monitoring - Materials - Yearly amount is unit cost			\$ 1,500.00
Reporting - Yearly amount is unit cost (Annual O&M report, including gw monitoring)		25	\$ 3,500.00
Post Remediation Monitoring - Yearly amount is unit cost (cap maintenance and erosion control for 25 yrs)		25	\$ 8,500.00
well abandonment			
Sheet pile replacement 2200' x 60' deep		35	\$ 1,500
Deed restrictions (\$5000) and permanent markers (\$10,000)		2,200	\$ 1,600
2 15% Contingency			
3 State Oversight Costs (5%)			
Total Groundwater Monitoring and Maintenance and Operation			\$4,264,968.75
Miscellaneous Project Tasks			
1 Bid Documents and Contractor Procurement (annual O&M contract for 25 yrs)		25	\$5,000.00
2 Contractor Mobilization (5% of total project cost)			\$278,830.78
3 Closure Report (LS)		1	\$4,500.00
Total Miscellaneous Project Tasks			\$408,330.78

Total for Site Remediation: **\$5,984,946.41**

- ¹ Assume 50 feet btw borings
- ² If contaminant is unknown run "full scan"
- ³ SF of building multiplied by estimated height
- ⁴ If no Asbestos Survey has been completed, assume ordered demo of building
- ⁵ Assumed reinforced concrete
- ⁶ For sandy soil, assume 15' radius of influence, with wells 30' apart to cover entire plume
- ⁷ Measure distance to central location for SVE trailer from each well
- ⁸ First year - monthly, second year quarterly and remaining half year quarterly
- ⁹ Assume 1' of groundwater in bottom of entire excavation - Multiply excavation volume by 7.48 for estimated gallons
- ¹⁰ Trench installed width of plume on leading edge Use 0's in unit column if no groundwater remediation system
- ¹¹ Use only if "Groundwater Treatment" is chosen over removal Use 10's in unit column for estimated 10 years of O&M

Attachment 4



Sue Kaelber-Matlock, MDEQ-Bay City

Michigan Department of Environmental Quality
Cost Table for Environmental Claims
Golson Wetland Park
Woodside Ave, Bay City

23-Nov-09

part of GMPT RAP and Consent Judgment, owned by City of Bay City
Needs- annual groundwater monitoring for PCBs and metals for 25 yrs at 11 locations,
groundwater use and building restrictions, permanent markers,

Site Assessment				
Need		# of Units	Unit Cost	Total
1 GeoProbe and crew for 7 borings incl temp wells (per day) ¹			\$3,000.00	\$0.00
2 Soil Samples (2 per boring) ²				
A Full Scan ²			\$1,157.00	\$0.00
B VOCs only			\$110.00	\$0.00
C SVOCs only			\$221.00	\$0.00
D Metals only			\$184.00	\$0.00
E PCBs only			\$221.00	\$0.00
3 Water Samples (Monitoring at 11-existing wells)				
A Full Scan ²			\$1,157.00	\$0.00
B VOCs only			\$110.00	\$0.00
C SVOCs only			\$221.00	\$0.00
D Metals only (11 wells x 25 years)		275	\$184.00	\$50,600.00
E PCBs only (11 wells x 25 years)		275	\$221.00	\$60,775.00
4 Consultant Oversight (per day) (40 days from bid to report x 25 yrs)		1000	\$600.00	\$600,000.00
5 Investigation Report (LS)		25	\$3,000.00	\$75,000.00
6 15% Contingency				\$117,956.25
7 State Oversight Costs (5%)				\$45,216.56
Total Site Assessment Cost:				\$949,547.81

Attachment 4

Building Demolition				
Need		# of Units	Unit Cost	Total
1	Asbestos Abatement includes air monitoring and disposal (per linear ft. of pipe)		\$45.00	\$0.00
2	Transformer Removal			
	A Disposal Non-PCB Transformer Oil incl transportation (per gal.)		\$0.65	\$0.00
	B Disposal PCB Transformer Oil incl transportation (per gal.)		\$4.56	\$0.00
3	Bldg Demo includes Trucking and Disposal (per CF building standing)		\$0.37	\$0.00
4	Ordered Demolition (per CF of building standing)		\$0.65	\$0.00
5	Bldg Slab Demo includes Trucking and Disposal (per SF of building slab)		\$6.30	\$0.00
6	Consultant Oversight (per day)		\$600.00	\$0.00
7	15% Contingency			\$0.00
8	State Oversight Costs (5%)			\$0.00
Building Demolition Total:				\$0.00

Attachment 4

Soil Removal				
Need		# of Units	Unit Cost	Total
1 Soil Excavation and Disposal				
A Non-Hazardous Soil (per cubic yard)			\$50.00	\$0.00
B Hazardous Soil (per cubic yard)			\$150.00	\$0.00
2 Confirmation Sampling				
A Full Scan			\$1,157.00	\$0.00
B VOCs only			\$110.00	\$0.00
C SVOCs only			\$221.00	\$0.00
D Metals only			\$184.00	\$0.00
E PCBs only			\$221.00	\$0.00
3 Backfill and Compaction (per cubic yard)			\$20.00	\$0.00
4 Consultant Oversight (per day)			\$600.00	\$0.00
5 15% Contingency				\$0.00
6 State Oversight Costs (5%)				\$0.00
Total Soil Removal Cost				\$0.00

Attachment 4

Soil Vapor Extraction System			
Need		# of Units	Unit Cost
1 Soil Vapor Extraction System (Lump Sum)			
Construction Specifications (Lump Sum)			\$ 9,000 00
Cleaning & Grubbing (per acre)			\$ 4,725 00
SVE Well Installation (per well, avg 6' deep) ⁶			\$ 600 00
Collection Trench Excavation (per linear foot, 24" wide, 2' deep) ⁷			\$ 60 00
Piping Installation (per linear foot)			\$ 30 00
Non-Haz Contaminated Soil Transport and Disposal (CY of well and trench spoil)			\$ 50 00
General Backfill for Trench (per CY, from 2' to 0' bgs)			\$ 20 00
Cat-Ox unit rental (monthly)			\$ 7,500 00
2000 lb Granular Activated Carbon Unit			\$ 6,000 00
Purchase New Carbon for 30 months of operation @ \$1 25/lb ⁸			\$ 2,500 00
Dispose of Waste Carbon for 30 months of operation @ \$2 00/lb ⁸			\$ 4,000 00
Blower			\$ 10,000 00
SVE Trailer			\$ 20,000 00
O&M (Years)			\$ 25,000 00
Submittals (Lump Sum) for Monthly or Quarterly Reports			\$ 10,000 00
Verification of Soil Remediation Samples			\$ 150 00
Electrical (lump sum)			\$ 10,000 00
Mechanical (lump sum)			\$ 15,000 00
Start up & Trouble Shoot			\$ 15,000 00
Site Restoration			\$ 12,000 00
Verification of Soil Remediation Samples			\$ 150 00
2 Consultant Oversight (per day)			\$ 600 00
3 15% Contingency			\$ 0 00
4 State Oversight Costs (5%)			\$ 0 00
Total Soil Vapor Extraction Cost			\$ 0 00

Attachment 4

Groundwater Removal				
Need		# of Units	Unit Cost	Total
1	Groundwater pumping to Frac Tank			
A	8 hours of pumping, Manned (per day)		\$1,760.00	\$0.00
B	Frac Tank Delivery (per hour) - Assume 8 hours unless known		\$95.00	\$0.00
C	Frac Tank Rental - 21,000 gal (per week)		\$266.00	\$0.00
D	Frac Tank Decon (per hour) - Assume 8 hours unless known		\$145.00	\$0.00
2	Groundwater Disposal			
A	Waste Water Characterization			
	1) Full Scan ²		\$1,157.00	\$0.00
	2) VOCs only		\$110.00	\$0.00
	3) SVOCs only		\$221.00	\$0.00
	4) Metals only		\$184.00	\$0.00
	5) PCBs only		\$221.00	\$0.00
B	Disposal Non-Hazardous Groundwater incl transportation (per gallon) ⁹		\$0.65	\$0.00
C	Disposal Hazardous Groundwater (per gallon)		\$4.56	\$0.00
3	Groundwater Monitoring Wells		\$450.00	\$0.00
4	Groundwater Confirmation Sampling			
A	Full Scan ²		\$1,157.00	\$0.00
B	VOCs only		\$110.00	\$0.00
C	SVOCs only		\$221.00	\$0.00
D	Metals only		\$184.00	\$0.00
E	PCBs only		\$221.00	\$0.00
5	Consultant Oversight (per day)		\$600.00	\$0.00
6	15% Contingency			\$0.00
7	State Oversight Costs (5%)			\$0.00
Total Groundwater Removal Cost:				\$0.00

Attachment 4

Groundwater Treatment System				
Need		# of Units	Unit Cost	Total
1	Groundwater Collection System Installation			
	Cleaning & Grubbing (per acre)	1	\$ 4,725.00	\$0.00
	Collection Trench Excavation (per linear foot, 36" wide, 8' deep)	1	\$ 100.00	\$0.00
	Non-Haz Contaminated Soil Transport and Disposal (Cubic Yard or CY)	1	\$ 50.00	\$0.00
	Pea Gravel for Trench Backfill (per CY, from 8' to 4' bgs)	1	\$ 20.00	\$0.00
	General Backfill for Trench (per CY, from 4' to 0' bgs)	1	\$ 20.00	\$0.00
	Groundwater Well/Sump Installation (per well, incl well installation)	1	\$ 3,000.00	\$0.00
	Groundwater Recovery Pumps (per well, incl installation)	1	\$ 3,000.00	\$0.00
	Air Compressor (10 Hp for pumps)	1	\$ 7,500.00	\$0.00
	Piping Installation (per linear foot)	1	\$ 30.00	\$0.00
	Co-Precipitation Remediation System - Purchase	1	\$248,000.00	\$0.00
	Co-Precipitation Remediation System Installation	1	\$ 66,000.00	\$0.00
	Treatment System Trailer - Purchase	1	\$ 20,000.00	\$0.00
	Liquid Phase GAC Vessels for Carbon (1000 Lbs Capacity) - Purchase	1	\$ 3,500.00	\$0.00
	Mechanical	1	\$ 18,000.00	\$0.00
	Electrical	1	\$ 18,000.00	\$0.00
	Sewer Connection & Permitting	1	\$ 15,000.00	\$0.00
	Start up & Trouble Shoot	1	\$ 15,000.00	\$0.00
	Site Restoration	1	\$ 12,000.00	\$0.00
2	Consultant Oversight (per day)			\$600.00
3	15% Contingency			\$0.00
4	State Oversight Costs (5%)			\$0.00
Total Groundwater Treatment Cost:				\$0.00

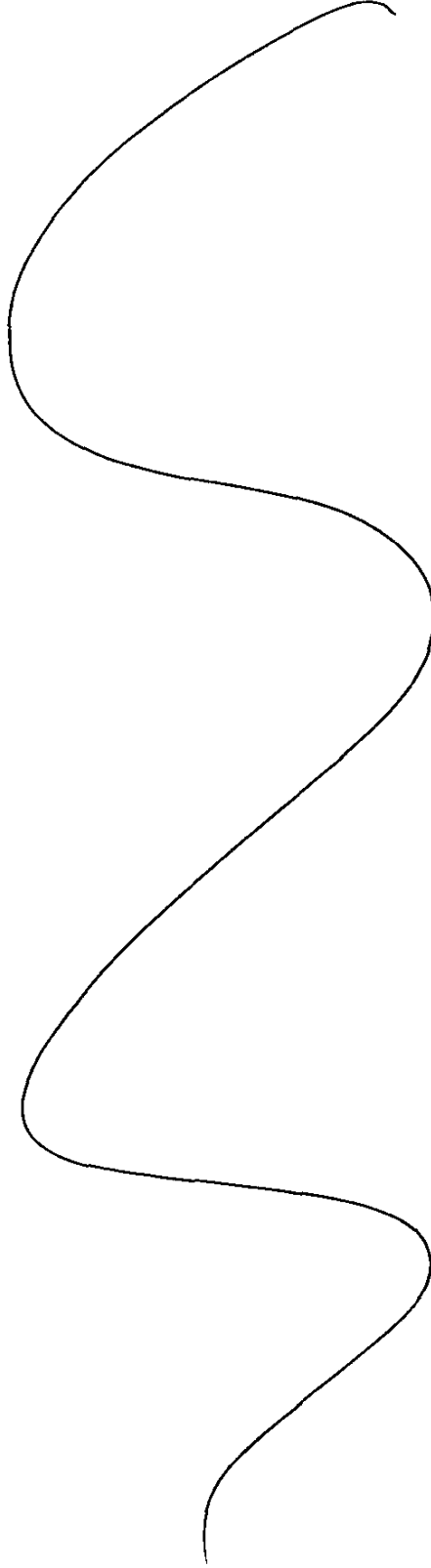
Groundwater System Monitoring and Operation and Maintenance for 20 Years				
Need		# of Units	Unit Cost	Total
1	System O&M			
	Utilities (per year)	1	\$ 4,500.00	\$0.00
	Wastewater Discharge (\$1 22780 gallons)	1	\$ 12,000.00	\$0.00
	Purchase of new carbon (1000 lbs per month @\$1 25/lb) Yearly amount is unit cost	1	\$15,000.00	\$0.00
	Dispose of Carbon & Change Out (1000lbs/month @ \$2/lb) - Hazardous Waste Yearly amount is unit cost	1	\$ 24,000.00	\$0.00
	Sludge Disposal (4 ton/month @ \$300/ton, only for sludge from Co-precipitation) Yearly amount is unit cost	1	\$ 14,400.00	\$0.00
	Monitoring - Materials - Yearly amount is unit cost (20 years)	1	\$ 1,500.00	\$0.00
	Reporting - Yearly amount is unit cost (20 years)	1	\$ 3,500.00	\$0.00
	Well abandonment (11 existing MWs)	11	\$ 1,500.00	\$16,500.00
	Post Remediation Monitoring - Yearly amount is unit cost (1	\$ 8,500.00	\$0.00
2	15% Contingency			\$2,475.00
3	State Oversight Costs (5%)			\$948.75
Total Groundwater Monitoring and Maintenance and Operation Cost:				\$19,923.75

Attachment 4

	Miscellaneous Project Tasks
1 Bid Documents and Contractor Procurement (sampling contractor annually for 25 years)	\$125,000.00
2 Contractor Mobilization (5% of total project cost)	\$0.00
3 Closure Report (LS)	\$4,500.00
4 Land Use restrictions, (\$5,000), permanent markers (\$10,000)	\$15,000.00
Total Miscellaneous Project Tasks:	\$144,500.00

Total for Site Remediation: \$1,113,971.56

- ¹ Assume 50 feet btw borings
- ² If contaminant is unknown run "full scan"
- ³ SF of building multiplied by estimated height
- ⁴ If no Asbestos Survey has been completed, assume ordered demo of building
- ⁵ Assumed reinforced concrete
- ⁶ For sandy soil, assume 15' radius of influence, with wells 30' apart to cover entire plume
- ⁷ Measure distance to central location for SVE trailer from each well
- ⁸ First year - monthly, second year quarterly and remaining half year quarterly
- ⁹ Assume 1' of groundwater in bottom of entire excavation - Multiply excavation volume by 7.48 for estimated gallons
- ¹⁰ Trench installed width of plume on leading edge Use 0's in unit column if no groundwater remediation system
- ¹¹ Use only if "Groundwater Treatment" is chosen over removal Use 10's in unit column for estimated 10 years of O&M



Attachment 5



Sue Kaelber-Matlock, MDEQ-Bay City

**Michigan Department of Environmental Quality
Cost Table for Environmental Claims**

**Delphi Peninsula Landfill (property owned by REALM, adjacent to Delphi Plant 2)
Salt St, Saginaw**

23-Nov-09

MLC is claiming responsibility for selenium in groundwater only, Delphi is responsible for chlorinated solvents in groundwater and soil
Site Needs - Excavation of soils for source removal, confirmation sampling, and gw monitoring for 10 years

Site Assessment and Groundwater Confirmation				
Need		# of Units	Unit Cost	Total
1 GeoProbe and crew for 4 borings incl temp wells (per day)		10	\$3,000.00	\$30,000.00
2 Soil Samples (2 per boring) (to verify area that requires excavation)				
A Full Scan (20 SBx2 samples/SB=40 samples) (1-time investigation effort)		40	\$1,157.00	\$46,280.00
B VOCs only			\$110.00	\$0.00
C SVOCs only			\$221.00	\$0.00
D Metals only			\$184.00	\$0.00
E PCBs only			\$221.00	\$0.00
3 Water Samples (annual monitoring of 20 wells for baseline and 10 years after excavation)				
A Full Scan (20 wells x 11 years= 220 samples)		220	\$1,157.00	\$254,540.00
B VOCs only			\$110.00	\$0.00
C SVOCs only			\$221.00	\$0.00
D Metals only			\$184.00	\$0.00
E PCBs only			\$221.00	\$0.00
4 Consultant Oversight (per day) (Sampling contractor needed for 30 days x 11 years)		330	\$600.00	\$198,000.00
5 Monitoring Report (annual submittal for baseline and 10 years)		11	\$3,000.00	\$33,000.00
Eco evaluation			\$25,000.00	\$25,000.00
6 15% Contingency			\$84,273.00	\$84,273.00
7 State Oversight Costs (5%)			\$33,554.65	\$33,554.65
Total Site/Assessment Cost				\$704,647.65

Attachment 5

Building Demolition				
Need			Unit Cost	Total
1 Asbestos Abatement includes air monitoring and disposal (per linear ft. of pipe)			\$45.00	\$0.00
2 Transformer Removal				
A - Disposal Non-PCB Transformer Oil incl transportation (per gal)			\$0.65	\$0.00
B - Disposal PCB Transformer Oil incl transportation (per gal)			\$4.56	\$0.00
3 Bldg Demo includes Trucking and Disposal (per CF building standing)			\$0.37	\$0.00
4 Ordered Demolition (per CF of building standing)			\$0.65	\$0.00
5 Bldg Slab Demo includes Trucking and Disposal (per SF of building slab)			\$6.30	\$0.00
6 Consultant Oversight (per day)			\$600.00	\$0.00
7 15% Contingency				\$0.00
8 State Oversight Costs (5%)				\$0.00
Building Demolition Total:				\$0.00

Attachment 5

Soil Removal			
Need Source control to remove 3.7 acres x 12' deep (to water table)	# of Units	Unit Cost	Total
1 Soil Excavation and Disposal			
A Non-Hazardous Soil (per cubic yard)	72,000	\$50.00	\$3,600,000.00
B Hazardous Soil (per cubic yard)		\$150.00	\$0.00
2 Confirmation Sampling-100 confirmation samples to confirm VOC, PCB, SVOC removal			
A Full Scan	100	\$1,157.00	\$115,700.00
B VOCs only		\$110.00	\$0.00
C SVOCs only		\$221.00	\$0.00
D Metals only		\$184.00	\$0.00
E PCBs only		\$221.00	\$0.00
3 Backfill and Compaction (per cubic yard)	72,000	\$20.00	\$1,440,000.00
4 Consultant Oversight (per day) (excavation contractor for 5 months from bid to closure)	100	\$600.00	\$60,000.00
5 Excavation Report	1	\$3,000.00	\$3,000.00
6 15% Contingency			\$782,355.00
7 State Oversight Costs (5%)			\$300,052.75
Total Soil Removal Cost:			\$6,301,107.75